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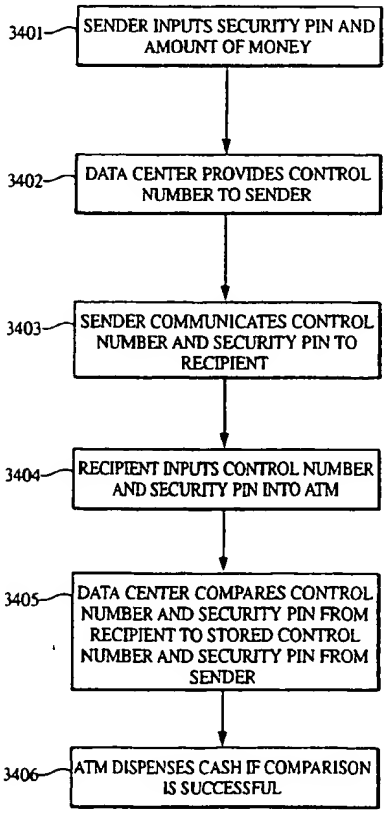

(57) Abstract: A system for transferring money includes a processing center and first, second, and third devices, such as automatic teller machines. The first device is used to pre-arrange a money transfer with the processing center. The second device is used to provide funds for the money transfer to the processing center. The third device is used to dispense money corresponding to the money transfer based on the funds at the processing center.

WO 00/75889 A2

BNSDOCID <WO 0075889A2 I >

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AUTOMATIC TELLER MACHINE

Background of the Invention

The present invention relates to automatic teller machines ("ATMs").

ATMs are currently in use throughout the industrialized world. Individual ATMs are owned by specific banks; however, through networks such as NYCE® and Cirrus® users are afforded the ability to access accounts at different institutions using a single ATM.

Most often, access to an account is provided through a card having a magnetic strip that contains account information and the user's personal identification number ("PIN"). To access an account, the user simply inserts the card into the ATM or, more recently, "swipes" the card through the ATM's card reader. Software in the ATM then reads the information on the magnetic strip and prompts the user to enter a PIN. If the input and read PINs match, the user is given access to his accounts.

Originally, ATMs were used simply for withdrawing cash from a selected account. Recently, however, ATMs have become more sophisticated. For example, modern ATMs accept deposits, and allow users to transfer money between existing bank accounts and to purchase stamps.

BNSDOCID <WO 0075889A2 I >

Summary Of The Invention

In general, in one aspect, the invention features a computer-implemented system, performed by a processing device, for transferring an amount of money using first and second devices. Data specifying the amount of money to be transferred is received from the first device and a first control number is obtained that corresponds to the amount of money to be transferred. A second control number is received from the second device, but not data specifying the amount of money to be transferred. The second device is instructed to dispense the amount of money if the first control number matches the second control number.

This aspect of the invention may include one or more of the following features. The first and second devices are automatic teller machines, or the first device is a computer and the second device is an automatic teller machine. The control number is generated by the processing device. First and second additional numbers are received from the first and second devices, and the second device is instructed to dispense the amount of money if the first additional number matches the second additional number. The first and second additional numbers correspond to a security number that is provided by a sender of the amount of money and that identifies the sender.

Data is received by the processing device indicating

BNSDOCID <WO 007588SA2 I >

that the amount of money has been input into the first device, and the control number is generated in response to the data indicating that the amount of money has been input into the first device. Data is received specifying the amount of money from an account maintained by a third party, and the control number is generated in response to receiving the data. The amount of money to be transferred from the first device is in a first currency and the amount of money to be dispensed from the second device is in a second currency. A currency conversion is performed by the processing device between the first and second currencies. The first control number is stored in a temporary file, and the temporary file is deleted in a predetermined period of time if the second control number is not received within the predetermined period of time.

In general, in another aspect, the invention is directed to a computer-implemented system, performed by a processing device, for effecting a money transfer from a sender to a recipient. The invention features receiving first information from the recipient that includes an amount of money to be transferred, requesting the amount of money from the sender, and receiving second information from the recipient. A device is instructed to dispense the amount of money to the recipient if at least part of the first information matches the second information.

This aspect may include one or more of the following

BNSDOCID <WO 0075889A2 I >

features. The first information includes identification information for the recipient and a specification of the amount of money. The second information includes identification information for the recipient. A control number is generated for the money transfer, and the second information includes the control number.

Data is received by the processing device indicating that the amount of money has been provided by the sender, and the control number is generated in response to the data indicating that the amount of money has been provided by the sender. The sender provides the amount of money from one or more of the following: an existing account, a credit card, a debit card, a smart card, and cash. Data is received indicating that the sender has provided the amount of money, and the device is instructed to dispense the money in response to the data indicating that that sender has provided the amount of money.

The first and second information are both received from automatic teller machines. The first information is received from a computer and the second information is received from an automatic teller machine. The first information is received via telephone and the second information is received from an automatic teller machine. The amount of money to be transferred from the sender is in a first currency and the amount of money dispensed to the recipient is in a second currency. A currency

BNSDOCID <WO 0075889A2 >

conversion is performed between the first and second currencies. The first information is stored in a temporary file. The temporary file is deleted in a predetermined period of time if either the sender does not provide the amount of money within the predetermined period of time or the recipient does not provide the second information within the predetermined period of time.

In general, in another aspect, the invention is directed to paying a vendor from an automatic teller machine. The invention features receiving data identifying a vendor from the automatic teller machine, receiving data corresponding to a payment amount from the automatic teller machine, and transferring, to the vendor, an amount of money corresponding to the payment amount.

This aspect of the invention may include one or more of the following features. An account number is received from the automatic teller machine and is also transferred to the vendor. The payment amount is received at the automatic teller machine or accessed from an account. The data identifying the vendor includes a name of the vendor and an account number maintained by the vendor.

In general, in another aspect, the invention is directed to opening an account using an automatic teller machine. This aspect of the invention features receiving an identification of a user, assigning the user an

BNSDOCID <WO 0075889A2 I >

account number, and displaying the account number to the user. The assigned account number is indexed to the received identification of the user.

This aspect of the invention may include one or more of the following features. Money is received from the user and added to the account. The money is received from an account maintained for the user by a third party or as cash at the automatic teller machine.

In general, in another aspect, the invention is directed to advertising on an automatic teller machine. This aspect of the invention features receiving information about a user, storing a profile of the user which includes the information, and displaying advertising to the user on the automatic teller machine based on the information in the profile.

This aspect of the invention may include one or more of the following features. The advertising is selected for display based on the information in the profile. Identification information is received from the user and the profile is retrieved based on the identification information. The advertising is obtained for display from a storage medium in the automatic teller machine. The advertising is obtained for display from an external source, such as the Internet. A response to the advertising is received from the user via the automatic teller machine, and the user is connected to a subject of the advertising. The profile contains demographic

BNSDOCID <WO 0075889A2 I >

information relating to the user.

In general, in another aspect, the invention is directed to receiving a money transfer at an automatic teller machine. The invention features providing data from a recipient of the money transfer to a processing center, the data identifying the recipient but not specifying an amount of money to be transferred, and receiving an instruction from the processing center to dispense the amount of money in response to the data.

This aspect of the invention may include one or more of the following features. The amount of money is dispensed by the automatic teller machine. Data is provided from the recipient of the money transfer to the processing center to pre-arrange the money transfer. The data to pre-arrange the money transfer includes a representation of an amount of money to be transferred. The data includes one or more of the following: identification information for the recipient, a control number generated by the processing center, a security number provided by a sender of the money, and a personal identification code provided by the recipient.

In general, in another aspect, the invention is directed to a system for transferring money. The system features a processing center, a first device used to pre-arrange a money transfer with the processing center, a second device used to provide funds for the money transfer to the processing center, and a third device

BNSDOCID <WO 0075889A2 I >

used to dispense money corresponding to the money transfer based on the funds at the processing center.

This aspect of the invention may include one or more of the following features. The first device is a computer, the second device is an automatic teller machine, and the third device is an automatic teller machine. The first, second and third devices are automatic teller machines. The first device is a telephone, the second device is an automatic teller machine, and the third device is an automatic teller machine.

Other features and advantages of the invention will become apparent from the following description, including the claims and drawings.

Brief Description of the Drawings

Fig. 1 shows a network;

Fig. 2 shows an ATM in the network;

Figs. 3 to 33, 35, and 37 to 48 show screen displays for the ATM;

Fig. 34 is a flowchart showing a process for transferring money using the ATM;

Fig. 36 is a flowchart showing an alternate process for transferring money using the ATM; and

Fig. 49 is a flowchart showing a process for advertising using the ATM.

Description

Fig. 1 shows a network 1 on which an embodiment of the invention may be implemented. Network 1 may be any type of network that is capable of connecting nodes dispersed over a large geographic area. For example, the Internet or a wide area network ("WAN") may be used.

Network 1 includes ATMs 2, 4 and 5, server 3, data center ("DC") 6, computer 8, and links to companies 7 and financial institutions 9. The individual nodes of network 1 may be located in any country or countries; however, for illustration's sake, ATMs 2 and 4 are depicted as being located in the United States ("U.S.") and ATM 5 is depicted as being located in a foreign country, such as Mexico.

DC 6 includes a mainframe computer or other centralized processing device which acts as the hub of network 1. DC 6 includes a processor 13 and a memory 10 which stores database 12 and code 14. Database 12 includes currency conversion rates, information relating to companies 7 and financial institutions 9, the locations and identities of each ATM on network 1, ATM money transfer rates, ATM vendor payment rates, and ATM account rates. When executed by processor 13, code 14 uses this information, and information received from the ATMs, to perform the functions described below.

Fig. 2 shows a more detailed schematic view of ATM 2. The other ATMs on network 1 have features similar to

BNSDOCID <WO 0075889A2 I >

ATM 2 and, therefore, are not described in detail. ATM 2 includes a network connection 15 and/or a fax modem connection 16 for interfacing to network 1. ATM 2 includes card reader 17, keypad 19, CD-ROM drive 20, receipt printer 21, bill dispenser 22, journal printer 23, bill acceptor 24, digital camera 25, display screen 26, stereo speakers 27, fingerprint identifier 28 and palm identifier 28a.

Display screen 26 displays information to a user, including advertising, a touch keypad, instructions, and company and bank logos. Display screen 26 may be a 15 inch super VGA monitor. Alternatively, a liquid crystal ("LCD") display or other cathode ray tube ("CRT") display may be used. Stereo speakers 27 provide sound in addition to, or instead of, the images on display screen 26.

CD-ROM drive 20 plays CD-ROMs that contain pre-stored advertising and other information for use on ATM 2. A disk drive (not shown) or DVD drive (also not shown) may be included instead of, or in addition to, CD-ROM drive 20. These additional storage media may contain information for enhancing ATM 2's display and/or functionality.

Keypad 19 inputs information into the ATM. It typically contains twelve keys -- numbers 0 to 9, "YES", and "NO". Keypad 19 may be programmable, meaning that it can be used to operate the ATM or to access video

BNSDOCID <WO 0075889A2 I >

advertising or other information stored in ATM 2. Encryption circuitry (not shown) may also be provided with keypad 19 for encrypting data as it is input to the ATM.

Card reader 17 is a "swipe"-type reader which reads data from the magnetic strip of an ATM card, a credit card, or any other information-bearing card. Alternatively, a motorized card reader or smart card reader may be used. Digital camera 25 is a standard imaging device that captures digital images and transfers the captured digital images to a processor. Receipt printer 21 is a thermal, dot matrix, or laser printer for printing receipts that summarize transactions and for outputting those receipts to a user. Journal printer 21 is one of the above types of printers for printing an electronic transaction journal maintained by the ATM. Bill dispenser 22 outputs various denominations of currency using friction technology or suction technology. Bill acceptor 24 receives currency from the user in various denominations.

View 29 shows the internal architecture of ATM 2. ATM 2 includes display interface 30, keypad interface 31, CD-ROM interface 32, digital camera interface 33, bill acceptor interface 34, bill dispenser interface 35, receipt printer interface 36, card reader interface 37, journal printer interface 38, processor 39, RAM 40, computer bus 41, and memory 42.

BNSDOCID <WO 0075889A2 I >

Memory 42 is a computer-readable medium, such as a computer hard disk and/or RAID ("redundant array of inexpensive disks"). Memory 42 stores database 44, code 45, and operating system 46. Operating system 46 is a Windows-based operating system such as Microsoft® Windows® NT; although other operating systems may be used as well. Database 44 includes information specific to ATM 2. For example, it may contain information indicating the amount of cash stored in ATM 2, an identifier for ATM 2, the country in which ATM 2 is located, ATM cards that may be accepted by ATM 2, and/or the internal hardware/software configuration of ATM 2. Code 45 includes network communications software 47 which enables ATM 2 to communicate with DC 6 and other nodes on network 1, ATM application 49 which generates screens and performs the ATM functions described below (along with standard ATM transactions), and image recognition software 50 which recognizes currency denominations input via bill acceptor 24 and which performs facial biometric recognition and other recognition processes.

Processor 39 is a microprocessor or similar device for executing code 45 out of RAM 40. Executable code, in particular video advertising, may also be stored on CD-ROM. Processor 39 accesses this code via CD-ROM interface 32. Keypad interface 31 provides data input via keypad 19 to processor 39. Display interface 30 is a display processor for outputting video and other imagery to

BNSDOCID <WO 0075889A2 | >

display screen 26. Digital camera interface 33 receives digital images from digital camera 25 and provides those images to processor 39. Card reader interface 37 receives information from an ATM card, credit card, debit card, smart card (see below), or the like, in card reader 17 and transmits that information to processor 39. Bill acceptor interface 34, bill dispenser interface 35, receipt printer interface 36, and journal printer interface 38, are used by processor 39 to control the ATM's mechanical functions.

Figs. 3 to 33, 35, and 37 to 48 depict screens generated by ATM application 49. ATM 2 starts with screen 51 (Fig. 3). This screen displays advertising retrieved from CD-ROM or downloaded from network 1. Touching anywhere on screen 51 causes the ATM to display screen 52 (Fig. 4). This screen displays a description 54 of the ATM's functions (in this embodiment, the ATM is referred to as "DVP 2000"), graphics and logos 55, GO button 56, and CANCEL button 57. GO button 56 and CANCEL button 57 are touch-sensitive control buttons. CANCEL button 57 returns the ATM to screen 51, whereas GO button 56 causes the ATM to display screen 59 (Fig. 5). Screen 59 displays ATM logo 60, the ATM owner's logo 61, promotional information 62, rate information 64, instructions 65, GO button 66, and CANCEL button 67. ATM logo 60 and ATM owner logo 61 appear on many screens and therefore will not be referenced on each screen. CANCEL

BNSDOCID <WO 00758894A2 >

button 67 returns ATM 2 to screen 51. GO button 66 causes ATM 2 to display screen 69.

Screen 69 (Fig. 6) displays advertising and promotional information 70, function buttons 71, and CANCEL button 72. CANCEL button 72 returns the user to screen 51. In this embodiment, ATM 2 includes four function buttons: TRANSFER MONEY button 74, VENDOR PAYMENT button 75, DVP ACCOUNT TRANSACTIONS button 76, and STANDARD ATM TRANSACTIONS button 77. STANDARD ATM TRANSACTIONS button 77 displays screens for performing standard ATM transactions, such as withdrawing money, depositing money into a pre-existing account, transferring money between existing accounts at a single bank (e.g., checking to savings), performing account inquiries, purchasing stamps, and the like. Since such transactions are well known in the art, detailed descriptions thereof are omitted.

TRANSFER MONEY button 74 initiates transfer of money between different ATMs on network 1. Actually, the money is transferred from one ATM to DC 6 and then from DC 6 to another ATM, thus allowing, e.g., a user at ATM 2 to transfer money to a user at ATM 5. VENDOR PAYMENT button 75 initiates payment of bills or the like via an ATM on the network. For example, a user at ATM 2 can select a vendor (e.g., a company 7) that he would like to pay, and then make payment using ATM 2. DVP ACCOUNT TRANSACTIONS button 76 initiates opening of new accounts (either at DC

6 or at a financial institution 9) using ATM 2. Detailed descriptions of each of the above functions are set forth below.

Money Transfers

Upon selecting TRANSFER MONEY button 74, the ATM displays screen 79 (Fig 7). Screen 79 includes CANCEL button 80 which returns the ATM to screen 69, SEND MONEY button 81, RECEIVE MONEY button 82, PRE-ARRANGE A MONEY TRANSFER (RECIPIENT) button 83, and PRE-APPROVED MONEY TRANSFER (SENDER) button 88. A user who wants to transfer money from ATM 2 to a user at another ATM selects SEND MONEY button 81. A user who wants to receive money transferred from another ATM to ATM 2 selects RECEIVE MONEY button 82. A user who wants to pre-arrange a transfer of money from another ATM to ATM 2 selects PRE-ARRANGE A MONEY TRANSFER (RECIPIENT) button 83. A user who wants to send money to another ATM in accordance with a pre-approved money transfer arranged using PRE-ARRANGE A MONEY TRANSFER (RECIPIENT) button 83 selects PRE-APPROVED MONEY TRANSFER (SENDER) button 88.

Sender-Initiated Money Transfer

Fig. 34 summarizes sender-initiated money transfers. Sender-initiated money transfers are performed by selecting SEND MONEY button 81. The details associated with sender-initiated money transfers are described

BNSDOCID <WO 0075889A2 >

below.

In 3401, the person who wants to send money ("the sender") inputs information, such as a security PIN and data specifying the amount of money to be transferred, to an ATM 2. The sender also provides the actual money to be transferred, either from cash or a card, as described below. The security PIN and data are communicated to DC 6, where they are indexed to one another and stored in database 12. DC 6 obtains a control number for the money transfer, stores the control number with the security PIN and data specifying the amount of money to be transferred, and provides (3402) the control number to the sender at ATM 2. DC 6 generates a unique control number for each money transfer. Alternatively, the control number may be selected and provided by the sender.

The sender communicates (3403) the security PIN and the control number to a recipient of the money. This communication takes place "offline", e.g., by telephone, electronic mail, or the like. The recipient inputs (3404) the security PIN and control number into an ATM 4. ATM 4 communicates the security PIN and control number to DC 6. DC 6 compares (3405) this information to the stored security PIN and control number and, if the two match, instructs ATM 4 to dispense the appropriate amount of money. ATM 4 dispenses (3406) the cash to the recipient. It is noted that the recipient need not input

data specifying the amount of money to be transferred in order to receive the money.

Referring to Fig. 8, screen 84 appears after SEND MONEY button 81 has been selected from screen 79 (Fig. 7). Screen 84 displays instructions 85, touch keypad 86, transfer amount field 87, GO button 89, and CANCEL button 90. An amount of money to be transferred is entered in transfer amount field 87 using touch keypad 86. Alternatively, keypad 19 may be used to enter the amount. Here, the amount to be transferred is listed in U.S. dollars because ATM 2 is located in the U.S. For ATMs located in foreign countries, such as ATM 5, the amount may be listed in the currency of that country. Generally speaking, each ATM will accept the currency of the country in which it is located. However, options (not shown) may be provided, either on screen 84 or prior to screen 84, for selecting a type of currency to be transferred. For example, rather than transferring pesos from ATM 5, an option may be provided for transferring U.S. dollars.

Once the transfer amount has been input on screen 84, GO button 89 causes ATM 2 to display screen 91 (Fig. 9) (CANCEL button 90 returns the ATM to screen 79). Screen 91 includes CANCEL button 92, which returns the ATM to screen 79, and currency transfer buttons 94. Currency transfer buttons 94 provide for money transfer using an ATM card (DEBIT MY ATM CARD button 95), a credit

BNSDOCID <WO 0075889A2 I >

card (DEBIT MY CREDIT CARD button 96), or (I WANT TO USE CASH button 97). Although not shown, other options may also be provided on screen 91 for currency transfer. For example, options may be provided for a user to transfer money from an account, such as a trust account or standard account maintained with DC 6 or a financial institution 9. An option may also be provided for a user to transfer money using a smart card. In this context, "smart card" refers to a card having a storage area (e.g., a memory) for storing data which corresponds to the amount of money that can be transferred using the smart card.

DEBIT MY ATM CARD button 95 displays screen 99 (Fig. 10). Screen 99 includes CANCEL button 100, which returns ATM 2 to screen 91. Screen 99 also includes instructions 101 and animated graphics 102 which show how and where to input an ATM card. GO button 104 displays screen 105 (Fig. 11). Screen 105 includes CANCEL button 106 which returns ATM 2 to screen 91, instructions 107, and touch keypad 109 for inputting a PIN into security PIN # field 110. The PIN is typically the PIN associated with the user's ATM card. However, for security purposes, the user may select a different PIN for use specifically with money transfers. This "money transfer" PIN may be indexed to the user's ATM card and used to retrieve the ATM PIN for verification.

Once a PIN has been input into field 110 of screen

105, the PIN is transferred to DC 6 for verification. DC 6 verifies the input PIN against information stored in its database 12 or transfers the PIN to one or more of financial institutions 9 for verification. While the PIN is being verified, screen 111 (Fig. 12) is displayed. This screen may include an incremental timer 112 which indicates the amount of time that verification takes.

If the user's ATM PIN is verified, screen 114 (Fig. 13) is displayed. In this case, the amount of money being transferred is debited from the user's ATM account (e.g., a checking or savings account) and data specifying that money (i.e., an electronic funds transfer) is transferred to an account maintained by DC 6. It is from this account that the money is transferred to a "receiving" ATM. DC 6 assigns the money transfer a control number, which in this embodiment may be a random eight digit number unique to the current money transfer. It is noted, however, that the invention is not limited to use with a random eight digit number and that any size number or character combination may be used. Alternatively, the control number may be provided by the sender on an ATM screen field (not shown), instead of by DC 6. The amount of money being transferred is indexed to this control number and then stored in database 12 of DC 6. The control number is also provided to ATM 2, where it is printed out on a receipt or displayed to the user/sender. This number is used by a recipient to

BNSDOCID <WO 0075889A2 I >

retrieve the transferred money (see below).

For further security, a second number may be indexed to the money transfer. This second number may also be needed before the money can be retrieved. The user's ATM PIN or a user-selected random number may be used. This second number may also be printed on the receipt, depending upon security considerations. Following screen 114, ATM 2 returns to screen 51 (Fig. 3). If there is a problem with the transaction after screen 111, screen 115 (Fig. 14) is displayed, followed by screen 51. In this case, a receipt showing a "void" transaction may be printed.

Returning to screen 91 (Fig. 9), upon selecting DEBIT MY CREDIT CARD button 96, ATM 2 displays screen 116 (Fig. 15). Screen 116 includes CANCEL button 117 which returns the user to screen 91. Screen 116 also displays instructions 119 and animated graphics 120 which show how and where to input a credit card. GO button 121 displays screen 105 (Fig. 11). Thereafter, the process is identical to that described above for an ATM card at screen 105.

If I WANT TO USE CASH button 97 is selected from screen 91 (Fig. 9), and the user has arrived at screen 91 via screen 84 (Fig. 8), ATM 2 displays screen 122 (Fig. 16). Screen 122 includes CANCEL button 124 which returns the ATM to screen 91 and instructions 125 on how to use the screen. Screen 122 also includes touch keypad 126

BNSDOCID <WO 00758898A2 >

for inputting a security PIN into field 127. In this embodiment, the security PIN is a random number chosen by the user, which can be different for each money transfer. Once the security PIN has been entered, GO button 129 displays screen 130 (Fig. 17). There, the user is instructed 131 to input cash into bill acceptor 24 in the amount shown in "XXX". This amount is typically greater than the amount to be transferred, since it includes the fee for each transfer. To inform the user of these fees, rates chart 132 is provided. Animated graphics 134 shows how and where to insert the money. CANCEL button 133 returns the ATM to screen 91 (Fig. 9).

As money is being inserted into bill acceptor 24, image recognition software 50 ensures that the money is non-counterfeit legal tender, in the proper currency and denominations. It also confirms that the proper amount has been input. If an insufficient amount of money has been input, ATM 2 prompts the user to input more money. Similarly, "change" options may be provided to refund money in excess of the required amount.

Once the correct amount of money has been input and GO button 135 has been touched, ATM 2 forwards data indicating the amount and the user's security PIN to DC 6. DC 6 assigns a control number to the current money transfer and stores the transfer amount in database 12 indexed to both the control number and user's security PIN. ATM 2 then displays, in succession, screens 111

BNSDOCID <WO 0075889A2 I >

(Fig. 12), 114 (Fig. 13) and 51 (Fig. 3), whereafter ATM 2 prints out a receipt that includes the control number and, if security is not a major concern, the user's security PIN. If security is a concern, only one of the two numbers, usually the control number, can be printed on the receipt. A screen may be provided by which the customer can select whether, and which numbers, to print on the receipt. If there is a problem, screen 115 (Fig. 14) is displayed in lieu of screen 114, followed by screen 51.

Returning to screen 79 (Fig. 7), a user initiates receipt of a money transfer by touching RECEIVE MONEY button 2. The "receiving" ATM (e.g., ATM 4) may use the same currency as the "transferring" ATM or a different currency depending upon the countries in which the two ATMs are located. If the same currency is used at both ATMs, currency conversions need not be performed. If different currencies are used, as would be the case in transferring money from ATM 2 to ATM 5, DC 6 performs any conversions.

Currency exchange rates are received at DC 6 from financial institutions 9 and stored in its database 12. The exchange rates may be updated periodically, for example, daily. Alternatively, DC 6 may request exchange rates on a "per money transfer" basis so as to ensure that the most up-to-date rates are used for conversion.

In any case, when a money transfer is performed

PNSDOCID: WO 0075889A2 I >

between a sending ATM 2 and receiving ATM 4, sending ATM 2 sends DC 6 data indicating the amount of money to be transferred along with its ID. The ATM may also indicate the type currency input, particularly if the ATM can accept more than one type of currency. If the ATM accepts only one type of currency, the DC may determine the type of currency (e.g., pesos, dollars, lire) based on the ID of the ATM. For example, DC 6 knows that ATM 5 is located in Mexico. So, when ATM 5 acts as sending ATM, DC will know that the currency is Mexican pesos and not U.S. dollars.

RECEIVE MONEY button 82 on screen 79 causes ATM 4, the receiving ATM in this example, to display screen 93 (Fig. 35). Screen 93 asks 98 the user who initiated the money transfer. If the recipient initiated the money transfer, the money transfer is referred to as "pre-arranged" (described below). If the sender initiated the money transfer (this case), ATM 4 displays screen 136 (Fig. 18).

Screen 136 contains instructions 137 which describe how to operate ATM 4 and CANCEL button 139 which returns the user to screen 79 (Fig. 7). Screen 136 also includes touch keypad 140, security PIN # field 141, and control # field 142. To receive transferred money, the recipient of the money enters the security PIN of the person who transferred the money into field 141 and the control number of the money transfer into field 142 using touch

BNSDOCID <WO 0075889A2 I >

keypad and arrows 143. The sender provides these numbers to the recipient. This can be done in any number of ways. For example, the sender can telephone the recipient with the information or send the information by electronic mail.

Once the appropriate numbers have been entered into fields 141 and 142, GO button 144 displays screen 111 (Fig. 12). Screen 111 indicates that the transaction is being processed. During this time, DC 6 checks the entered security PIN and control number against those stored in database 12. If it finds a match, DC 6 tells receiving ATM 4 how much money to dispense (and, if necessary, in what currency -- i.e., if the ATM stores more than one type of currency). The recipient may also select the type of currency that he would like to receive. In this case, the information is transmitted to DC 6 which performs any necessary conversions and tells the receiving ATM 4 how much money to dispense and in what currency.

The actual money is output through bill dispenser 22, whereafter screen 114 (Fig. 13) is displayed followed by screen 51 (Fig. 3). If there is a problem, such as incorrect PINs, screen 115 (Fig. 14) is displayed instead of screen 114. Screen 115 may be modified to indicate exactly what the problem is. For example, it could output a message indicating that the security PIN is correct but the control number is incorrect or vice

PNSDOCID <WO 0075889A2 I >

versa. An option may be provided for contacting a "live" person at a "help desk" maintained at/by DC 6.

Instead of receiving the money directly from receiving ATM 4, the recipient may re-direct the money. For example, options (not shown) may be provided on ATM 4 for the recipient to direct DC 6 to deposit the money in an existing bank account maintained by a financial institution 9 or by DC 6. The money may also be used to open up a new account via DC 6 using ATM 4. The process for opening up a new account is described below.

Alternatively, the money from the money transfer may be used by DC 6 to make cash disbursements (in the form of electronic funds transfers) to third parties selected by the recipient. For example, the recipient may direct DC 6 to pay a vendor using the money from the money transfer. Vendor payment is described below.

As still another alternative, DC 6 may maintain a trust account on behalf of the recipient, providing funds only in accordance with preset criteria provided by the sender. For example, the sender may direct (via unshown options on ATM 2) DC 6 to disperse portions of a money transfer to the recipient on a monthly basis. In this case, the recipient would go to ATM 4 after a predetermined time each month to receive the money.

ATM 4 may also include hardware (not shown) for issuing a smart card to the recipient. The smart card may include the money from the money transfer and may be

BNSDOCID <WO 0075889A2 I >

vendor-specific, as described below, or used for any other purpose. The sender may designate that a smart card is to be issued to the recipient for a money transfer.

Although the foregoing describes a case in which the sender uses an ATM to initiate a money transfer, the invention is not limited as such. Other ways of initiating a money transfer may be used. These other ways, however, may not allow the sender to use cash in the transfer. That is, the sender may be limited to transferring money from a credit card, debit card, pre-existing account, smart card, or the like. For example, a sender may initiate a money transfer by providing the necessary information, e.g., amount of transfer, security PIN, credit card number, debit card number, or the like to DC 6 using a personal computer 8 (Fig. 1). For example, DC 6 may be connected to the Internet. A server 3 acts as the intermediary between the sender at computer 8 and DC 6.

Server 3 may be a World Wide Web server, which contains software for generating a Web page (not shown), onto which the necessary information may be input. Server 3 provides this information to DC 6 and also provides any information from DC 6 to computer 8, such as the control number described above. Server 3 may be a separate computer, as shown, or it may be software stored in memory 10 and executed by processor 13 in DC 6.

As still another alternative, a sender may initiate the money transfer by calling into DC 6 using a telephone. An automated telephone menu may be used, through which the sender can enter the information needed to initiate the money transfer, such as the amount of the transfer and a security PIN. Instead of using an automated menu, DC 6 may direct the sender's call to a "live" operator who may take the information from the user "manually" and who may then enter the information into DC 6. Video-conferencing may also be used to initiate the money transfer in other embodiments.

Recipient-Initiated (Pre-Arranged) Money Transfer

Fig. 36 summarizes recipient-initiated money transfers. Pre-arranged money transfers are performed by selecting PRE-ARRANGE A MONEY TRANSFER (RECIPIENT) button 83 from screen 79 (Fig. 7). The details associated with pre-arranged money transfers are described below.

In 3601, a person who wants to receive money ("the recipient") provides information to DC 6. This information includes the amount of money that the recipient wants to receive, along with identification information such as the recipient's driver's license number, social security number, personal identification number, and the like. This information may be communicated to DC 6 via an ATM 2 or by any other means, such as a computer, telephone, or video-conferencing

BNSDOCID <WO 0075889A2 I >

equipment, as described below. DC 6 stores this information in database 12.

The recipient communicates (3602) the information to the sender. This may be done "offline", as above. To transfer the money to the recipient, the sender inputs (3603) the identification information into an ATM 4. DC 6 compares (3604) the identification information input by the sender to that stored for the money transfer. If the two match, DC 6 instructs (3605) ATM 4 to request the amount of money associated with the money transfer from the sender. The sender inputs (3606) the money via one of several methods (see below). ATM 4 itself confirms that the amount input by the sender equals that required for the money transfer (via image recognition software 50) and provides DC 6 with data indicating that the correct amount has been input. DC 6 stores this data along with the identification information for the money transfer.

Once the sender has input the money, the sender informs the recipient that the money can be retrieved. At this point, the recipient may receive the money at any ATM connected to DC 6. To receive the money, the recipient enters (3607) the identification information into an ATM. The ATM transfers this identification information to DC 6, which then compares (3608) the identification information input by the sender to that stored for the money transfer. When DC 6 finds

BNSDOCID <WO 00075889A2 >

identification information that matches the identification information input by the recipient, DC 6 instructs (3609) ATM 2 to dispense the amount of money to the recipient. ATM 2 then dispenses (3610) the money.

Referring now to screen 79 (Fig. 7), selecting PRE-ARRANGE A MONEY TRANSFER (RECIPIENT) button 83 (hereinafter simply "PRE-ARRANGE button 83") on ATM 2, enables a user (recipient) to pre-arrange a transfer of money from a sender to the recipient. Selecting PRE-ARRANGE button 83 displays screen 300 (Fig. 37). Screen 300 includes CANCEL button 301 which returns the user to screen 79, and GO button 302 which causes ATM 2 to display screen 304 (Fig. 38). Also included on screen 300 are promotional messages 305 advising the recipient of the benefits of pre-arranging a money transfer and instructions 306 on how to pre-arrange a money transfer.

Screen 304 (Fig. 38) displays an information chart 306 that compares rates associated with money transfers performed using ATM 2 and competitors, such as Western Union®. Cancel button 307 returns the ATM to screen 79 (Fig. 7) and GO button 309 causes ATM 2 to display screen 310 (Fig. 39). Screen 310 includes instructions 31 on how to operate screen 310. Using numeric keypad 312 and UP/DOWN navigation arrows 314, the recipient inputs identification and other information in fields 315.

The identification information in fields 315 includes the recipient's driver's license number 316 and

BNSDOCID <WO 0075889A2 I >

the recipient's social security number 317. The invention, however, is not limited to using this particular identification information, or even to using only two types of information. Only one type of identifying information may be entered, if desired, or more than two types of identifying information may be entered, depending upon the configuration of screen 310.

Also entered in fields 315 is the amount 319 of money to be transferred from a sender to the recipient. The type of currency may vary depending upon the location of ATM 2. For example, since ATM 2 is located in the U.S., the currency will be U.S. dollars. If ATM 2 were located in Mexico, the currency would be Mexican Pesos. Options, however, may be provided to receive a particular type of currency. For example, an ATM located in the U.S. may be configured to dispense Mexican Pesos and vice versa. Options indicating the type of currency to be received by a recipient may be located on screen 310 or another screen (not shown) may be used.

If the sending and receiving ATMs are not located in the same country, or if different currencies are used at both ATMs, any necessary currency conversions are performed by DC 6. That is, if the recipient wants Mexican pesos and the sender only has U.S. dollars, DC 6 will receive the money in Pesos from ATM 2, convert from Pesos to U.S. dollars, and instruct the sender (as described below) to input the appropriate amount in U.S.

BNSDOCID <WO 0075889A2 I >

dollars.

The recipient may also input a personal identification code 320 onto screen 310 (Fig. 39). This personal identification code 320 may be a random, e.g., 12 digit, number. The personal identification code can be omitted, if desired. Letters may also be included in the information entered in fields 315. For example, an alphanumeric keypad (not shown) may be used instead of simply a numeric keypad 312 (this holds true throughout this application).

Selecting CANCEL button 321 on screen 310 causes ATM 2 to display screen 79 (Fig. 7). Selecting GO button 322 on screen 310 causes ATM 2 to display screen 324 (Fig. 40). Screen 324 advises the recipient the transaction is being processed. During this time, ATM 2 sends the information in fields 315 to DC 6. DC 6 determines whether that information is sufficient to pre-arrange a money transfer. For example, DC 6 determines if the information currently identifies another money transfer and, if so, DC 6 may notify the recipient to select, e.g., a different personal identification code. An incremental timer 325 indicates the amount of time for approval of the money transfer.

If the money transfer is approved, ATM 2 displays screen 326 (Fig. 41), which notifies the recipient of approval. In this case, DC 6 creates a temporary file in database 12 to store information relating to the money

BNSDOCID <WO 0075889A2 I >

transfer. This information includes, but is not limited to, the amount of the transfer, any necessary currency conversions, and identification information associated with the transfer, such as the recipient's driver's license number, social security number, personal identification code, and any control number generated by DC 6.

The temporary file expires after a predetermined amount of time, such as a week, ten days, or any other time period. The sender must therefore consummate the money transfer within this amount of time or else the file is deleted automatically at the end of that time. The sender consummates the money transfer by sending the money within that period of time. If the sender does not send the money in the time allotted, the recipient must pre-arrange the money transfer again. Alternatively, a "permanent" file, i.e., one that is not deleted after a predetermined amount of time, may be used to store information relating to the money transfer. A temporary file may also be used to store the control number and security PIN in the sender-initiated money transfer described above. In that case, the recipient must retrieve the money within the predetermined period of time or the temporary file expires, i.e., is deleted, from DC 6.

If the money transfer is approved by DC 6 (screen 326), ATM 2 issues a confirmation receipt, which may or

BNSDOCID <WO 0075889A2 I >

may not include the information input in fields 315. In addition, DC 6 may generate a unique control number associated with the money transfer. This number may also be printed on the confirmation receipt and/or stored in the file in DC 6 associated with the money transfer. Following screen 326, ATM 2 displays screen 51 (Fig. 3).

If the money transfer is not approved by DC 6, ATM 2 displays screen 327 (Fig. 42). Screen 327 may simply provide an indication that the money transfer (or "transaction") is incomplete, as shown. Alternatively, screen 327 may provide an indication as to why the money transfer was defective, e.g., missing identification information or the like. In this instance, the recipient may be provided with the option of revisiting screen 310 (Fig. 39) to input new or corrected identification information. If new or corrected information cannot be/is not input, ATM 2 may provide the recipient with a receipt indicating that the money transfer is void.

Returning to Fig. 7, after a money transfer has been pre-approved by DC 6, PRE-APPROVED MONEY TRANSFER (SENDER) button 88 (hereinafter simply "PRE-APPROVED button 88") is selected by the sender (e.g., at ATM 4) to transfer the money to the recipient. Selecting PRE-APPROVED button 88 causes ATM 4 to display screen 329 (Fig. 43). Screen 329 displays a promotional message 330 describing the benefits of performing a money transfer

BNSDOCID <WO 00758894A2 >

using ATM 4 and instructions 331 to the sender explaining how to proceed with the money transfer. Selecting CANCEL button 332 returns ATM 4 to screen 79 (Fig. 7) and selecting GO button 334 causes ATM 4 to display screen 335 (Fig. 44).

Screen 335 includes instructions 336 explaining how to send money via ATM 4. Screen 335 also includes numeric keypad 337 and arrow keys 38 for entering identification information in fields 339. The identification information corresponds to that entered on screen 310 (Fig. 39) by the recipient. A control number may also be entered if one was generated by DC 6. The information is typically provided to the sender by the recipient after the recipient pre-arranges the money transfer. As noted above, the invention is not limited to the information in fields 39. That is, the sender need only input the information that was input by the recipient. So, if the recipient input different information from that shown or more or less information than that shown, the sender's input would change correspondingly. Selecting GO button 340 following the input of information in fields 339 causes ATM 4 to display screen 341 (Fig. 45). Selecting CANCEL button 342 causes ATM 4 to return to screen 79 (Fig. 7).

Screen 341 provides an indication 344 that the current transaction is being processed. An incremental timer 345 keeps track of the processing time. During

BNSDOCID <WO 0075889A2 I >

this processing, the information input in fields 339 (Fig. 44) is provided to DC 6. In this example, the information includes the recipient's driver's license number, the recipient's social security number, and the recipient's personal identification code. DC 6 compares the information from fields 339 to that stored in the temporary file for the current money transfer. This file may be indexed using any of the information from fields 339. If the information matches, DC 6 sends a message to ATM 4 instructing the sender on how to proceed, which message ATM 4 displays to the sender.

Screen 346 (Fig. 46) shows the message 347 provided to ATM 4. As shown, the message includes the amount 349 that the recipient would like to receive, any fees 350 associated with sending the money, and the total amount 351 (the sum of the amount 349 and the fees 350) that the sender needs to input into ATM 4 in order to transfer the money to the recipient. Message 347 also includes the date 352 by which the amount must be input. This date will only be included in cases where a temporary file is used to store the money transfer information in DC 6, since the date corresponds to when the temporary file is to be deleted. Selecting GO button 354 causes ATM 4 to display screen 91 (Fig. 9). If CANCEL is selected, ATM 4 returns to screen 79 (Fig. 7). From screen 91, the sender is prompted to select the manner of inputting the amount 351. If the sender selects DEBIT MY ATM CARD

BNSDOCID <WO 0075889A2 I >

button 95 or DEBIT MY CREDIT CARD button 96, screens on ATM 4 follow the flow described above. If the sender selects I WANT TO USE CASH button 97 at this point, ATM 4 goes directly to screen 130 (Fig. 17), bypassing screen 122 (Fig. 16) which is first displayed in the flow for the sender-initiated transfer.

From screen 130, the sender inputs the amount 351 of cash into bill acceptor 24, as above. Image recognition software 50 stored in ATM 4 confirms that the amount of cash input to ATM 4 equals the amount 351 required for the money transfer. If the amount of cash is insufficient, ATM 4 may display a message (not shown) to the sender, which instructs the sender to input the required amount. If the required amount is not received by ATM 4 within a predetermined amount of time, ATM 4 displays screen 115 (Fig. 14). Screen 115 (Fig. 15) is displayed if there is a problem with the money transfer, e.g., due to technical problems or insufficient information. If the required amount is received, ATM 4 displays screen 114 (Fig 13).

Receiving money in connection with a pre-arranged money transfer is similar to the process for receiving money described above. That is, the recipient goes to an ATM, which may be the same or a different ATM from that used to pre-arrange the money transfer and that used by the sender to input the money. At the ATM, the recipient navigates through the ATM screens until screen 79 (Fig.

BNSDOCID: <WO 0075889A2 >

7) is reached. At screen 79, the recipient selects RECEIVE MONEY button 82, which causes the ATM to display screen 93 (Fig. 35). Screen 93 asks 98 the user who initiated the money transfer. If the recipient initiated the money transfer, as is the case in a pre-arranged money transfer, the ATM displays screen 360 (Fig. 47).

Screen 360 contains instructions 361 which describe how to operate the ATM and CANCEL button 362 which returns the user to screen 79 (Fig. 7). Screen 360 also includes touch keypad 364, arrow keys 365, and identification information fields 366. The recipient enters the same identification information into fields 366 that the recipient used to set up the money transfer (fields 315, Fig. 39). In this example, the fields include driver's license number 369, social security number 370, and personal identification code 371. However, these fields may change based on the configuration of the ATM and which information was used to set up the money transfer. Also, a field may be provided to enter a DC-generated control number (if available). The amount of the transfer need not be entered at this point.

To receive transferred money, the recipient enters the required information in fields 366 using numeric keypad 364 and arrow keys 365 (or whatever type of keypad is provided). Once the appropriate information has been input, GO button 370 causes the ATM to display screen 111

BNSDOCID <WO 00075889A2 >

(Fig. 12). Screen 111 indicates that the transaction is being processed. During this time, DC 6 checks the identification information from fields 366 against the information for the transaction stored in a file for the money transfer in database 12. If a match is found, DC 6 tells the receiving ATM how much money to dispense (and, if necessary, in what currency -- i.e., if the ATM stores more than one type of currency). The customer may also select the type of currency that he would like to receive. In this case, the information is transmitted to DC 6, which performs any necessary conversions and tells the receiving ATM how much money to dispense and in what currency.

The actual money is output through bill dispenser 22, whereafter screen 114 (Fig. 13) is displayed followed by screen 51 (Fig. 3). If there is a problem, such as incorrect identification information, screen 115 (Fig. 14) is displayed instead of screen 114. Screen 115 may be modified to indicate exactly what the problem is. For example, it could output a message indicating that the social security number is correct but the driver's license number is incorrect or vice versa.

As above, instead of receiving the money directly from receiving ATM 4, the recipient may re-direct the money. For example, options (not shown) may be provided on ATM 4 for the recipient to direct DC 6 to deposit the money in an existing bank account maintained by a

financial institution 9 or by DC 6. The money may also be used to open up a new account via DC 6 using ATM 4. The process for opening up a new account is described below.

Alternatively, the money from the money transfer may be used by DC 6 to make cash disbursements (in the form of electronic funds transfers) to third parties selected by the recipient. For example, the recipient may direct DC 6 to pay a vendor using the money from the money transfer. Vendor payment is described below.

As still another alternative, DC 6 may maintain a trust account on behalf of the recipient, providing funds only in accordance with preset criteria provided by the sender. For example, the sender may direct (via unshown options on ATM 2) DC 6 to disperse portions of a money transfer to the recipient on a monthly basis. In this case, the recipient would go to ATM 4 after a predetermined time each month to receive the money.

ATM 4 may also include hardware (not shown) for issuing a smart card to the recipient. The smart card may include the money from the money transfer and may be vendor-specific, as described below, or used for any other purpose. The sender may designate that a smart card is to be issued to the recipient for a money transfer.

Although the foregoing describes using an ATM to pre-arrange a money transfer, the invention is not

BNSDOCID <WO 0075889A2 I >

limited as such. Other ways of pre-arranging a money transfer may be used. For example, a recipient may pre-arrange a money transfer by providing the necessary information (fields 315, Fig. 39) to DC 6 using a computer 8 (see Fig. 1). For example, DC 6 may be connected to a network 1, such as the Internet. Server 3 acts as the intermediary between the recipient at computer 8 and DC 6.

Server 3 may be a World Wide Web server, which contains software for generating a Web page (not shown), onto which the information of fields 315 may be input. Server 3 provides this information to DC 6 and also provides any information from DC 6 to computer 8, such as a control number or the like. As noted, server 3 may be a separate computer, as shown, or it may be software stored in memory 10 and executed by processor 13 of DC 6.

As still another alternative, a recipient may pre-arrange the money transfer by calling into DC 6 using a telephone. An automated telephone menu may be used, through which the recipient can enter the information needed to pre-arrange a money transfer (fields 315, Fig. 39). Instead of using an automated menu, DC 6 may direct the recipient's call to a "live" operator who may take the information from the user "manually" and who may then enter the information into DC 6. Video-conferencing may also be used to pre-arrange the money transfer.

Once the money transfer is pre-arranged by the

recipient, the remainder of the process is the same as that described above. That is, the sender uses an ATM (or other device) to input the money and the recipient uses an ATM to receive the money. Other processes performed by DC 6, such as file storage and comparisons, are also unchanged.

Vendor Payment

Returning to screen 69 (Fig. 6), touching VENDOR PAYMENT button 75 causes the ATM to display screen 145 (Fig. 19). There, the user is provided with instructions 150 for selecting from among icons 151. Each of these icons corresponds to a vendor that accepts payment from ATM 2. These vendors may be among companies 7, in which case immediate electronic funds transfers can be used to provide payment. On the other hand, the vendors may have an alternative agreement with the owner of DC 6.

Touching an icon 151 followed by GO button 152 causes the ATM to display screen 154 (Fig. 20) (CANCEL button 155 returns the user to screen 69). Screen 154 is a vendor-specific screen that displays vendor logo 155, vendor messages 156, instructions 157, and animation 159. The instructions and animation relate to a vendor-provided identification card or smart card. This card includes a magnetic strip or memory with a vendor account number and PIN. Once the user swipes or inserts the card and hits GO button 160, the ATM displays screen 161

BNSDOCID <WO 0075889A2 I >

(CANCEL button 162 returns the ATM to screen 145). For vendors that do not issue such cards, screen 154 need not be displayed. Alternatively, a "skip" button (not shown) may be provided on screen 154 to forward the user to the next screen.

Screen 161 (Fig. 21) displays instructions 162, arrow keys 163, and touch keypad 164. In screen 161, a payment amount is input in field 165 and a PIN is input in field 166. The payment amount is in a currency that is accepted by the ATM. In cases where the vendor has not provided a payment card, this screen can be modified to accept an account number instead of a PIN number. In either case, once the appropriate information has been entered, GO button 167 causes the ATM to display screen 169 (Fig. 22) (CANCEL button 170 returns the ATM to screen 154).

In screen 169, vendor messages 171 are displayed. Also, the user is asked how he would like to pay the vendor. Two options are provided: DEBIT MY ATM CARD button 172 and I WANT TO USE CASH button 174. An option to pay by credit card may also be provided on screen 169.

Touching DEBIT MY ATM CARD button 172 returns the ATM to screen 99 (Fig. 10). Thereafter, the ATM proceeds through screens 105 (Fig. 11), 111 (Fig. 12), and 114 (Fig. 13) (or 115 (Fig. 14) if there is a problem). Processing of the transaction at DC 6 is different than transferring money, however. More specifically, once the

amount of money is debited from the user's account (via his ATM card), it is transferred to the vendor. For vendors on network 1, the funds are transferred electronically along with the user's account number. For vendors not on network 1, DC 6 maintains a payment log in memory 10, whereafter vendors are paid by other means based on the information stored in the log. Once payment has been made, ATM 2 provides a receipt of the transaction as proof of payment. This receipt includes the vendor's name and any other identification information, together with the amount paid and the user's account number.

Touching I WANT TO USE CASH button 174 on screen 169 returns the ATM to screen 130 (Fig. 17). There, the user is prompted to input the payment amount (plus ATM fees) into bill acceptor 24. Thereafter, the process proceeds through screens 111 (Fig. 12) and 114 (Fig. 13) (or 115 (Fig. 14) if there is a problem). Once the appropriate amount has been entered into the ATM and verified by image recognition software 50, and the necessary information (payment amount, vendor ID, account number) has been transferred to DC 6, payment of the vendors by DC 6 is the same as for payment by ATM card.

DVP 2000 Account Transactions

Returning to screen 69 (Fig. 6), if DVP ACCOUNT TRANSACTION button 76 is selected, the ATM displays

BNSDOCID <WO 0075889A2 I >

screen 175 (Fig. 23). Screen 175 provides fee information 176 and promotional information 177, CANCEL button 179 which returns the user to screen 69, and GO button 180 which displays screen 181. Screen 181 (Fig. 24) provides an option to open a new account (OPEN DVP ACCOUNT button 182) and an option to execute a transaction on an existing account (EXISTING DVP ACCOUNT button 184).

OPEN DVP ACCOUNT button 182 causes the ATM to display screen 185 (Fig. 25). There, the user is instructed 186 to look into the lens of digital camera 25. A digital image of the user is captured and transmitted to processor 39 by hitting GO button 187. Processor 39 then executes image recognition software 50 which, in this case, performs a biometric routine to generate a "PIN" number for the user. This number is substantially unique to each user and, within an acceptable tolerance, is reproduced each time a digital image of the user's face is processed by image recognition software 50. In other embodiments, retinal scans, fingerprint, and/or palm recognition may be used instead of biometric facial recognition. Alternatively, the user may simply input a security PIN of his own choosing. In any case, once a PIN has been generated/selected, it is forwarded to DC 6 which uses the PIN to open an account at a financial institution or DC 6. CANCEL button 189 returns the ATM to display

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screen 181.

Next, screen 190 (Fig. 26) is displayed. In this embodiment, screen 190 displays a digitized image 191 of the user along with a message 192 indicating that a new account is being opened for the user. If alternative recognition technologies are used, a digitized image of the user may not be displayed. Typically, the account is opened in DC 6 (and thus managed by the owner of DC 6). However, accounts may also be opened at one of financial institutions 9. The account default may be "checking"; however, options may be provided for other accounts, such as trust accounts, savings accounts 401K accounts, individual retirement accounts, and the like.

Once an account has been opened, the ATM displays screen 194 (Fig. 27). This screen displays the account number 195, instructions 196 and 197, touch keypad and arrow keys 198, image 199, and fields 200 and 201 for displaying a deposit amount and account balance, respectively. In this embodiment, a deposit is required at this stage; otherwise the account will be closed. This, however, is not the case in all embodiments. To make a deposit into the new account, enter the deposit amount in field 200 and touch GO button 202 (CANCEL button 204 returns the ATM to screen 69 (Fig. 6)). Thereafter, the ATM displays screen 130 (Fig. 17). In screen 130, the user is prompted to input cash into the ATM. In this case, the amount deposited and the user's

BNSDOCID <WO 0075889A2 I >

new account number are forwarded to DC 6. The cash is then credited to the user's new account electronically (via network 1 or otherwise). In any case, processing proceeds from screen 130 through screens 111 (Fig. 12), 114 (Fig. 13) (or 115 (Fig. 14) if there is a problem), and 51 (Fig. 3). Money may also be input in to the account using an ATM, debit, or credit card as described above.

Returning to screen 181 (Fig. 24), if EXISTING DVP ACCOUNT button 184 is selected, the ATM again displays screen 185 (Fig. 25). There, the user is identified using the biometric identification process noted above (or whatever identification process is used by the ATM). ATM 2 then displays screen 205 (Fig. 28), otherwise it returns to screen 181 (Fig. 24).

Screen 205 prompts 206 the user to enter his account number in field 207 (CANCEL button 209 returns to screen 69). If an account number is entered in field 207 and GO button 210 is touched, ATM 2 displays screen 211 (Fig. 29). This screen displays a message 212 indicating that the account is being accessed. An incremental timer 214 may also be provided. During this time, ATM 2 forwards the requested account number and biometric (or other type of) identification information to DC 6. DC 6 then uses this information to attempt to access the user's account. If the account cannot be accessed, screen 115 (Fig. 14) is displayed followed by screen 51 (Fig. 3). If the

account can be accessed, screen 215 is displayed.

Screen 215 (Fig. 30) provides options 216 for accessing the account, along with the user's image 217. The options include CURRENT ACCOUNT BALANCE button 219, I WANT TO DEPOSIT MONEY button 220, and I WANT TO WITHDRAW MONEY button 221 (CANCEL button 222 returns the ATM to screen 69). Additional ATM function buttons may also be provided. CURRENT ACCOUNT BALANCE button 29 causes the ATM to display screen 224 (Fig. 31), which provides the current account balance 225. GO button 226 returns the ATM to screen 215 and CANCEL button 227 returns the ATM to screen 114 (Fig. 13) and then to screen 51 (Fig. 3).

I WANT TO DEPOSIT MONEY button 220 on screen 215 (Fig. 30) causes the ATM to display screen 230 (Fig. 32). Screen 230 provides a rate reminder chart 231, touch keypad and arrow keys 232, instructions 234, current account balance field 235, and deposit amount field 236. To deposit money, a user inputs the amount in deposit amount field 230 and hits GO button 240, whereafter the ATM returns to screen 130 (Fig. 17) followed by the processing described above. CANCEL button 241 returns the ATM to screen 215. Options may also be provided for transferring money from an existing account or for depositing money using a credit card, debit card, smart card, or the like.

I WANT TO WITHDRAW MONEY button 221 on screen 215 (Fig. 30) causes the ATM to display screen 242 (Fig. 33).

There, the user can withdraw an amount of money simply by inputting the amount in withdrawal amount field 244. Inputting this amount and hitting GO button 245 returns the ATM to screen 111 (Fig. 12), whereafter screen 114 (Fig. 13) is displayed and cash output to the user. Alternatively, screen 115 (Fig. 14) may be displayed, together with a message indicating reasons for errors. CANCEL button 246 button returns to screen 215 (Fig. 30).

Targeted Advertising

As shown in Fig. 48, for example, any and all screens of ATMs 2, 4 and 5 may include one or more areas 380 for displaying advertising. This advertising may be pre-stored, e.g., in a CD-ROM of the ATM, or the advertising may be stored in DC 6 and obtained from DC 6 by the ATM. The advertising may be targeted to ATM users, meaning that it may be customized based on the identity of the ATM user. For example, if an ATM user is known to prefer German cars, the advertising may include ads for BMW®, Mercedes®, and Volkswagen®.

Fig. 49 shows a process 381 that may be performed by software in ATM 2, for example, and/or DC 6 to target advertising to ATM users. Process 381 receives personal information that corresponds to an ATM user. Process 381 generates (4901) a profile for the user based on the personal information. The personal information may be obtained from the user himself, e.g., in response to a

questionnaire presented directly at the ATM or through DC 6 (e.g., via a Web page hosted by server 3). Alternatively, the personal information may be obtained from customer lists or other sources maintained by third parties, such as credit card companies and the like.

The personal information may include demographic information relating to the user, such as the user's age, sex, annual income, buying habits, marital status, residence address, and the like. The personal information may also include likes and dislikes of the user, which may be based upon prior purchases, questionnaire responses, store credit accounts, and the like. Basically, any relevant information that can be gathered about an ATM user may be included in the personal information.

The personal information is stored in database 12 of DC 6 as part of the profile for the ATM user. The profile is stored in association with identification information for the user. This identification information may include, but is not limited to, one or more of the following: a PIN number for the ATM user's credit card, ATM card, debit card, or the like; the ATM user's account number(s), such as checking or savings accounts; identification information for the ATM user that is stored on a smart card; and the ATM user's driver' license number, social security number, personal identification code, or other information that may be

BNSDOCID <WO 0075889A2 I >

used to identify the ATM user to DC 6.

Process 381 receives (4902) the identification information from a user at ATM 2. The identification information is typically input at the ATM itself by the user. For example, card reader 17 may be used to obtain the PIN number of the ATM user. The PIN number may be used to obtain the ATM user's checking or savings account numbers, if they are used as the identification information. Alternatively, the user may be given an option (not shown) to receive advertising. If the user selects that option, the user may be queried for the necessary identification information.

In any case, once ATM 2 receives the user's identification information, ATM 2 passes that information to DC 6. Process 381 retrieves the user's profile based on the received identification information. Process 381 reads (4903) the user's profile to determine which advertising to display to the user. Thus, referring to the example given above, if the ATM user's profile indicates that the user prefers German cars, process 381 may determine that advertising for German cars, such as BMW®, Mercedes®, and Volkswagen®, should be displayed to the user.

Process 381 selects (4904) appropriate advertising based on the personal information in the user's profile and displays (4905) that advertising to the ATM user while the ATM user is at the ATM. If the advertising is

stored in the ATM itself, DC 6 instructs the ATM which advertising to display. The advertising may be provided directly from DC 6 and/or server 3 to ATM 2. In this case, the advertising is downloaded by ATM 2 and displayed. In any case, the ATM owner may contract with an another part to carry advertising for that other party.

An option may be provided on the ATM to contact the company whose advertising is being displayed. For example a touch-sensitive button may be displayed on the ATM titled "CONTACT COMPANY". Touching this button causes the ATM to connect to a Web site for the advertising company and/or to send an electronic mail message to the company. The message may indicate, for example, that the ATM user is interested in a particular product and requests that the company mail more information about the product to the ATM user. Information such as the user's name and address may be obtained from the user's profile stored in DC 6. If the advertising is an offer for sale, the message may indicate that the user accepts the offer and would like to purchase the product. In this instance, purchase may be made directly at the ATM using, e.g., an ATM or credit card, transferring money from an account, or using money from a money transfer. Alternatively "YES" and "NO" buttons may be provided on an ATM screen (not shown), through which a user may accept or decline an offer from

BNSDOCID <WO 00758894A2 I >

an ATM advertiser.

Also, an incentive may be provided in the advertising to purchase a product. For example, a coupon or discount may be provided to the user if the user agrees to purchase the product at that time via the ATM.

DC 6 and/or server 3 may directly connect the user to Web pages (through the Internet) based on the contents of the user's profile (i.e., not in response to the user's reaction to advertising). For example, ATM 2 may display the contents of the BMW® homepage. The user may then be given the option to browse the contents of the BMW® Web site directly from the ATM. Browsing may be performed using a standard Web browser stored on the ATM and using a touch-sensitive screen, arrow and enter keys on the ATM keypad, a joystick, and/or roller ball on the ATM.

At this point, it is noted that the invention is not limited to the specific hardware and screen configurations set forth above. For example, network 1 will likely contain far more than three ATMs in two countries. In fact, the network may contain hundreds and/or thousands of ATMs located throughout the world. Similarly, the numbers of companies and financial institutions included in the network may vary into the hundreds and even thousands. To accommodate such numbers, more than one computer may be used at the DC. Also, the system may include more than one DC. Each DC

may be dedicated to certain ATMs, with the various DCs communicating with each other regarding transactions from the various ATMs. Likewise, the ATM screens depicted herein may vary depending upon the specific functions of the system, the owner of the ATM, the location of the ATM, and the like. More than one computer and/or server may also be connected to network 1. Network 1 may be interfaced to a telephone network, as well.

Other embodiments not described herein are also within the scope of the following claims.

What is claimed is:

BNSDOCID <WO 00758898A1 >

1. A computer-implemented method, performed by a processing device, for transferring an amount of money using first and second devices, comprising:

receiving, from the first device, data specifying the amount of money to be transferred;

obtaining a first control number that corresponds to the amount of money to be transferred;

receiving, from the second device, a second control number but not data specifying the amount of money to be transferred; and

instructing the second device to dispense the amount of money if the first control number matches the second control number.

2. The method of claim 1, wherein the first and second devices are automatic teller machines.

3. The method of claim 1, wherein the first device is a computer and the second device is an automatic teller machine.

4. The method of claim 1, further comprising generating the control number.

5. The method of claim 1, further comprising:

receiving first and second additional numbers from the first and second devices, respectively;

wherein the second device is instructed to dispense the amount of money if the first additional number matches the second additional number.

6. The method of claim 5, wherein the first and second additional numbers comprise a security number that is provided by a sender of the amount of money.

7. The method of claim 6, wherein the security number identifies the sender.

8. The method of claim 1, further comprising:

receiving data indicating that the amount of money has been input into the first device;

wherein the control number is generated in response to the data indicating that the amount of money has been input into the first device.

9. The method of claim 1, further comprising:

receiving data specifying the amount of money from an account maintained by a third party;

wherein the control number is generated in response to receiving the data.

10. The method of claim 1, wherein the amount of money to be transferred from the first device is in a first currency and the amount of money to be dispensed

BNSDOCID <WO 0075889A2 I >

from the second device is in a second currency.

11. The method of claim 10, further comprising performing a conversion between the first and second currencies.

12. The method of claim 1, further comprising:

storing the first control number in a temporary file; and

deleting the temporary file in a predetermined period of time if the second control number is not received within the predetermined period of time.

13. A computer-implemented method performed by a processing device for effecting a money transfer from a sender to a recipient, comprising:

receiving first information from the recipient that includes an amount of money to be transferred;

requesting the amount of money from the sender;

receiving second information from the recipient; and

instructing a device to dispense the amount of money to the recipient if at least part of the first information matches the second information.

14. The method of claim 13, wherein the first information comprises identification information for the recipient and a specification of the amount of money.

15. The method of claim 14, wherein the second information comprises identification information for the recipient.

16. The method of claim 13, further comprising:

generating a control number for the money transfer;

wherein the second information includes the control number.

17. The method of claim 16, further comprising:

receiving data indicating that the amount of money has been provided by the sender;

wherein the control number is generated in response to the data indicating that the amount of money has been provided by the sender.

18. The method of claim 13, wherein the sender provides the amount of money from one or more of the following: an existing account, a credit card, a debit card, a smart card, and cash.

19. The method of claim 13, further comprising:

receiving data indicating that the sender has provided the amount of money;

wherein instructing is performed in response to the data indicating that that sender has provided the amount

BNSDOCID <WO 0075889A2 | >

of money.

20. The method of claim 13, wherein the first and second information are both received from automatic teller machines.

21. The method of claim 13, wherein the first information is received from a computer and the second information is received from an automatic teller machine.

22. The method of claim 13, wherein the first information is received via telephone and the second information is received from an automatic teller machine.

23. The method of claim 13, wherein the amount of money to be transferred from the sender is in a first currency and the amount of money dispensed to the recipient is in a second currency.

24. The method of claim 23, further comprising performing a conversion between the first and second currencies.

25. The method of claim 13, further comprising:

storing the first information in a temporary file; and

deleting the temporary file in a predetermined

period of time if either the sender does not provide the amount of money within the predetermined period of time or the recipient does not provide the second information within the predetermined period of time.

26. A computer-implemented method performed by a processing device for paying a vendor from an automatic teller machine, the method comprising:

receiving data identifying a vendor from the automatic teller machine;

receiving data corresponding to a payment amount from the automatic teller machine; and

transferring, to the vendor, an amount of money corresponding to the payment amount.

27. The method of claim 26, further comprising receiving an account number from the automatic teller machine;

wherein transferring also transfers the account number to the vendor.

28. The method of claim 26, wherein the payment amount is received at the automatic teller machine.

29. The method of claim 26, wherein the payment amount is accessed from an account.

RNSDOCID <WO 00758894A2 I >

30. The method of claim 26, wherein the data identifying the vendor comprises a name of the vendor and an account number maintained by the vendor.

31. A computer-implemented method performed by a processing device for opening an account using an automatic teller machine, comprising:

receiving an identification of a user;

assigning the user an account number, the account number being indexed to the identification of the user; and

displaying the account number to the user.

32. The method of claim 31, further comprising:

receiving money from the user; and

adding the money to the account.

33. The method of claim 32, wherein the money is received from an account maintained for the user by a third party.

34. The method of claim 32, wherein the money is received as cash at the automatic teller machine.

35. A method of advertising on an automatic teller machine, comprising:

receiving information about a user;

storing a profile of the user which includes the information; and

displaying advertising to the user on the automatic teller machine based on the information in the profile.

36. The method of claim 35, further comprising selecting the advertising for display based on the information in the profile.

37. The method of claim 36, further comprising:

receiving identification information from the user; and

retrieving the profile based on the identification information.

38. The method of claim 35, wherein the advertising is obtained for display from a storage medium in the automatic teller machine.

39. The method of claim 35, wherein the advertising is obtained for display from an external source.

40. The method of claim 39, wherein the external source comprises the Internet.

41. The method of claim 35, further comprising:

receiving a response to the advertising from the

BNSDOCID <WO 0075889A2 I >

user via the automatic teller machine; and

connecting the user to a subject of the advertising.

42. The method of claim 35, wherein the profile contains demographic information relating to the user.

43. A computer-implemented method, performed on an automatic teller machine, for receiving a money transfer at the automatic teller machine, comprising:

providing data from a recipient of the money transfer to a processing center, the data identifying the recipient but not specifying an amount of money to be transferred; and

receiving an instruction from the processing center to dispense the amount of money in response to the data.

44. The method of claim 43, further comprising dispensing the amount of money.

45. The method of claim 43, further comprising providing data from the recipient of the money transfer to the processing center to pre-arrange the money transfer, the data to pre-arrange the money transfer including a specification of an amount of money to be transferred.

46. The method of claim 45, wherein the data

comprises one or more of the following: identification information for the recipient, a control number generated by the processing center, a security number provided by a sender of the money, and a personal identification code provided by the recipient.

47. A system for transferring money, comprising:

a processing center;

a first device used to pre-arrange a money transfer with the processing center;

a second device used to provide funds for the money transfer to the processing center; and

a third device used to dispense money corresponding to the money transfer based on the funds at the processing center.

48. The system of claim 47, wherein the first device is a computer, the second device is an automatic teller machine, and the third device is an automatic teller machine.

49. The system of claim 47, wherein the first, second and third devices are automatic teller machines.

50. The system of claim 47, wherein the first device is a telephone, the second device is an automatic teller machine, and the third device is an automatic

RNSDOCID <WO 0075889A2 | >

teller machine.

51. A computer program stored on a computer-readable medium for transferring an amount of money using first and second devices, the computer program comprising instructions that cause a computer to:

receive, from the first device, data specifying the amount of money to be transferred;

obtain a first control number that corresponds to the amount of money to be transferred;

receive, from the second device, a second control number but not data specifying the amount of money to be transferred; and

instruct the second device to dispense the amount of money if the first control number matches the second control number.

52. The computer program of claim 51, wherein the first and second devices are automatic teller machines.

53. The computer program of claim 51, wherein the first device is a computer and the second device is an automatic teller machine.

54. The computer program of claim 51, further comprising instructions to generate the control number.

55. The computer program of claim 51, further comprising instructions to:

receive first and second additional numbers from the first and second devices, respectively;

wherein the second device is instructed to dispense the amount of money if the first additional number matches the second additional number.

56. The computer program of claim 55, wherein the first and second additional numbers comprise a security number that is provided by a sender of the amount of money.

57. The computer program of claim 56, wherein the security number identifies the sender.

58. The computer program of claim 51, further comprising instructions to:

receive data indicating that the amount of money has been input into the first device;

wherein the control number is generated in response to the data indicating that the amount of money has been input into the first device.

59. The computer program of claim 51, further comprising instructions to:

receive data specifying the amount of money from an

BNSDOCID <WO 0075889A2 >

account maintained by a third party;

wherein the control number is generated in response to receiving the data.

60. The computer program of claim 51, wherein the amount of money to be transferred from the first device is in a first currency and the amount of money to be dispensed from the second device is in a second currency.

61. The computer program of claim 60, further comprising instructions to perform a conversion between the first and second currencies.

62. The computer program of claim 51, further comprising instructions to:

store the first control number in a temporary file; and

delete the temporary file in a predetermined period of time if the second control number is not received within the predetermined period of time.

63. A computer program stored on a computer-readable medium for effecting a money transfer from a sender to a recipient, the computer program comprising instructions that cause a computer to:

receive first information from the recipient that includes an amount of money to be transferred;

request the amount of money from the sender;

receive second information from the recipient; and

instruct a device to dispense the amount of money to the recipient if at least part of the first information matches the second information.

64. The computer program of claim 63, wherein the first information comprises identification information for the recipient and a specification of the amount of money.

65. The computer program of claim 64, wherein the second information comprises identification information for the recipient.

66. The computer program of claim 63, further comprising instructions to:

generate a control number for the money transfer;

wherein the second information includes the control number.

67. The computer program of claim 66, further comprising instructions to:

receive data indicating that the amount of money has been provided by the sender;

wherein the control number is generated in response to the data indicating that the amount of money has been

BNSDOCID <WO 00075889A2 I >

provided by the sender.

68. The computer program of claim 63, wherein the sender provides the amount of money from one or more of the following: an existing account, a credit card, a debit card, a smart card, and cash.

69. The computer program of claim 63, further comprising instructions to:

receive data indicating that the sender has provided the amount of money;

wherein instructing is performed in response to the data indicating that that sender has provided the amount of money.

70. The computer program of claim 63, wherein the first and second information are both received from automatic teller machines.

71. The computer program of claim 63, wherein the first information is received from a computer and the second information is received from an automatic teller machine.

72. The computer program of claim 63, wherein the first information is received via telephone and the second information is received from an automatic teller

machine.

73. The computer program of claim 63, wherein the amount of money to be transferred from the sender is in a first currency and the amount of money dispensed to the recipient is in a second currency.

74. The computer program of claim 73, further comprising instructions to perform a conversion between the first and second currencies.

75. The computer program of claim 63, further comprising instructions to:

store the first information in a temporary file; and

delete the temporary file in a predetermined period of time if either the sender does not provide the amount of money within the predetermined period of time or the recipient does not provide the second information within the predetermined period of time.

76. A computer program stored on a computer-readable medium for paying a vendor from an automatic teller machine, the computer program comprising instructions that cause a computer to:

receive data identifying a vendor from the automatic teller machine;

receive data corresponding to a payment amount from

RNSDOCID <WO 00758864A2 I >

the automatic teller machine; and

transfer, to the vendor, an amount of money corresponding to the payment amount.

77. The computer program of claim 76, further comprising instructions to receive an account number from the automatic teller machine;

wherein transferring also transfers the account number to the vendor.

78. The computer program of claim 76, wherein the payment amount is received at the automatic teller machine.

79. The computer program of claim 76, wherein the payment amount is accessed from an account.

80. The computer program of claim 76, wherein the data identifying the vendor comprises a name of the vendor and an account number maintained by the vendor.

81. A computer program stored on a computer-readable medium for opening an account using an automatic teller machine, the computer program comprising instructions that cause a computer to:

receive an identification of a user;

assign the user an account number, the account

number being indexed to the identification of the user; and

display the account number to the user.

82. The computer program of claim 81, further comprising instructions that cause the computer to:

receive money from the user; and

add the money to the account.

83. The computer program of claim 82, wherein the money is received from an account maintained for the user by a third party.

84. The computer program of claim 82, wherein the money is received as cash at the automatic teller machine.

85. A computer program stored on a computer-readable medium for advertising on an automatic teller machine, the computer program comprising instructions that cause a computer to:

receive information about a user;

store a profile of the user which includes the information; and

display advertising to the user on the automatic teller machine based on the information in the profile.

BNSDOCID <WO 0075889A2 I >

86. The computer program of claim 85, further comprising instructions that cause the computer to select the advertising for display based on the information in the profile.

87. The computer program of claim 86, further comprising instructions that cause the computer to:

receive identification information from the user; and

retrieve the profile based on the identification information.

88. The computer program of claim 85, wherein the advertising is obtained for display from a storage medium in the automatic teller machine.

89. The computer program of claim 85, wherein the advertising is obtained for display from an external source.

90. The computer program of claim 89, wherein the external source comprises the Internet.

91. The computer program of claim 85, further comprising instructions that cause the computer to:

receive a response to the advertising from the user via the automatic teller machine; and

connect the user to a subject of the advertising.

92. The computer program of claim 85, wherein the profile contains demographic information relating to the user.

93. A computer program stored on a computer-readable medium for receiving a money transfer at an automatic teller machine, the computer program comprising instructions that cause a computer to:

provide data from a recipient of the money transfer to a processing center, the data identifying the recipient but not specifying an amount of money to be transferred; and

receive an instruction from the processing center to dispense the amount of money in response to the data.

94. The computer program of claim 93, further comprising instructions to dispense the amount of money.

95. The computer program of claim 95, further comprising instructions to provide data from the recipient of the money transfer to the processing center to pre-arrange the money transfer, the data to pre-arrange the money transfer including a representation of an amount of money to be transferred.

96. The computer program of claim 95, wherein the

BNSDOCID <WO 0075889A2 I >

data comprises one or more of the following: identification information for the recipient, a control number generated by the processing center, a security number provided by a sender of the money, and a personal identification code provided by the recipient.

97. An apparatus for transferring an amount of money using first and second devices, comprising:

a memory which stores computer-executable instructions; and

a processor which executes the instructions to:

receive, from the first device, data specifying the amount of money to be transferred;

obtain a first control number that corresponds to the amount of money to be transferred;

receive, from the second device, a second control number but not data specifying the amount of money to be transferred; and

instruct the second device to dispense the amount of money if the first control number matches the second control number.

98. The apparatus of claim 97, wherein the first and second devices are automatic teller machines.

99. The apparatus of claim 97, wherein the first device is a computer and the second device is an

automatic teller machine.

100. The apparatus of claim 97, wherein the processor executes instructions to generate the control number.

101. The apparatus of claim 97, wherein the processor executes instructions to receive first and second additional numbers from the first and second devices, respectively; and

wherein the second device is instructed to dispense the amount of money if the first additional number matches the second additional number.

102. The apparatus of claim 101, wherein the first and second additional numbers comprise a security number that is provided by a sender of the amount of money.

103. The apparatus of claim 102, wherein the security number identifies the sender.

104. The apparatus of claim 97, wherein the processor executes instructions to receive data indicating that the amount of money has been input into the first device; and

wherein the control number is generated in response to the data indicating that the amount of money has been

input into the first device.

105. The apparatus of claim 97, wherein the processor executes instructions to receive data specifying the amount of money from an account maintained by a third party; and

wherein the control number is generated in response to receiving the data.

106. The apparatus of claim 97, wherein the amount of money to be transferred from the first device is in a first currency and the amount of money to be dispensed from the second device is in a second currency.

107. The apparatus of claim 106, wherein the processor executes instructions to perform a conversion between the first and second currencies.

108. The apparatus of claim 97, wherein the processor executes instructions to:

store the first control number in a temporary file; and

delete the temporary file in a predetermined period of time if the second control number is not received within the predetermined period of time.

109. An apparatus for effecting a money transfer

BNSDOCID <WO 00758894A2 >

from a sender to a recipient, comprising:

a memory which stores computer-executable instructions; and

a processor which executes the instructions to:

receive first information from the recipient that includes an amount of money to be transferred;

request the amount of money from the sender;

receive second information from the recipient; and

instruct a device to dispense the amount of money to the recipient if at least part of the first information matches the second information.

110. The apparatus of claim 109, wherein the first information comprises identification information for the recipient and a specification of the amount of money.

111. The apparatus of claim 110, wherein the second information comprises identification information for the recipient.

112. The apparatus of claim 109, wherein the processor executes instructions to generate a control number for the money transfer; and

wherein the second information includes the control number.

113. The apparatus of claim 109, wherein the processor executes instructions to receive data indicating that the amount of money has been provided by the sender; and

wherein the control number is generated in response to the data indicating that the amount of money has been provided by the sender.

114. The apparatus of claim 113, wherein the sender provides the amount of money from one or more of the following: an existing account, a credit card, a debit card, a smart card, and cash.

115. The apparatus of claim 109, wherein the processor executes instructions to receive data indicating that the sender has provided the amount of money; and

wherein instructing is performed in response to the data indicating that that sender has provided the amount of money.

116. The apparatus of claim 109, wherein the first and second information are both received from automatic teller machines.

117. The apparatus of claim 109, wherein the first information is received from a computer and the second

information is received from an automatic teller machine.

118. The apparatus of claim 109, wherein the first information is received via telephone and the second information is received from an automatic teller machine.

119. The apparatus of claim 109, wherein the amount of money to be transferred from the sender is in a first currency and the amount of money dispensed to the recipient is in a second currency.

120. The apparatus of claim 119, wherein the processor executes instructions to perform a conversion between the first and second currencies.

121. The apparatus of claim 109, wherein the processor executes instructions to:

store the first information in a temporary file; and

delete the temporary file in a predetermined period of time if either the sender does not provide the amount of money within the predetermined period of time or the recipient does not provide the second information within the predetermined period of time.

122. An apparatus for use in paying a vendor from an automatic teller machine, the apparatus comprising:

a memory which stores computer-executable

BNSDOCID <WO 0075889A2 >

instructions; and

a processor which executes the instructions to:

receive data identifying a vendor from the automatic teller machine;

receive data corresponding to a payment amount from the automatic teller machine; and

transfer, to the vendor, an amount of money corresponding to the payment amount.

123. The apparatus of claim 122, wherein the processor executes instructions to receive an account number from the automatic teller machine; and

wherein transferring also transfers the account number to the vendor.

124. The apparatus of claim 122, wherein the payment amount is received at the automatic teller machine.

125. The apparatus of claim 122, wherein the payment amount is accessed from an account.

126. The apparatus of claim 122, wherein the data identifying the vendor comprises a name of the vendor and an account number maintained by the vendor.

127. An apparatus for use in opening an account

using an automatic teller machine, comprising:

a memory which stores computer-executable instructions; and

a processor which executes the instructions to:

receive an identification of a user;

assign the user an account number, the account number being indexed to the identification of the user; and

display the account number to the user.

128. The apparatus of claim 127, wherein the processor executes instructions to:

receive money from the user; and

add the money to the account.

129. The apparatus of claim 128, wherein the money is received from an account maintained for the user by a third party.

130. The apparatus of claim 128, wherein the money is received as cash at the automatic teller machine.

131. An apparatus for advertising on an automatic teller machine, comprising:

a memory which stores computer-executable instructions; and

a processor which executes the instructions to:

BNSDOCID <WO 0075889A2 I >

receive information about a user;

store a profile of the user which includes the information; and

display advertising to the user on the automatic teller machine based on the information in the profile.

132. The apparatus of claim 131, wherein the processor executes instructions to select the advertising for display based on the information in the profile.

133. The apparatus of claim 132, wherein the processor executes instructions to:

receive identification information from the user; and

retrieve the profile based on the identification information.

134. The apparatus of claim 131, wherein the advertising is obtained for display from a storage medium in the automatic teller machine.

135. The apparatus of claim 131, wherein the advertising is obtained for display from an external source.

136. The apparatus of claim 135, wherein the external source comprises the Internet.

137. The apparatus of claim 131, wherein the processor executes instructions to:

receive a response to the advertising from the user via the automatic teller machine; and

connect the user to a subject of the advertising.

138. The apparatus of claim 131, wherein the profile contains demographic information relating to the user.

139. An automatic teller machine for receiving a money transfer, comprising:

a memory which stores computer-executable instructions; and

a processor which executes the instructions to:

provide data from a recipient of the money transfer to a processing center, the data identifying the recipient but not specifying an amount of money to be transferred; and

receive an instruction from the processing center to dispense the amount of money in response to the data.

140. The automatic teller machine of claim 139, wherein the processor executes instructions to cause the automatic teller machine to dispense the amount of money.

BNSDOCID <WO 0075889A2 I >

141. The automatic teller machine of claim 139, wherein the processor executes instructions to provide data from the recipient of the money transfer to the processing center to pre-arrange the money transfer, the data to pre-arrange the money transfer including a representation of an amount of money to be transferred.

142. The automatic teller machine of claim 141, wherein the data comprises one or more of the following: identification information for the recipient, a control number generated by the processing center, a security number provided by a sender of the money, and a personal identification code provided by the recipient.

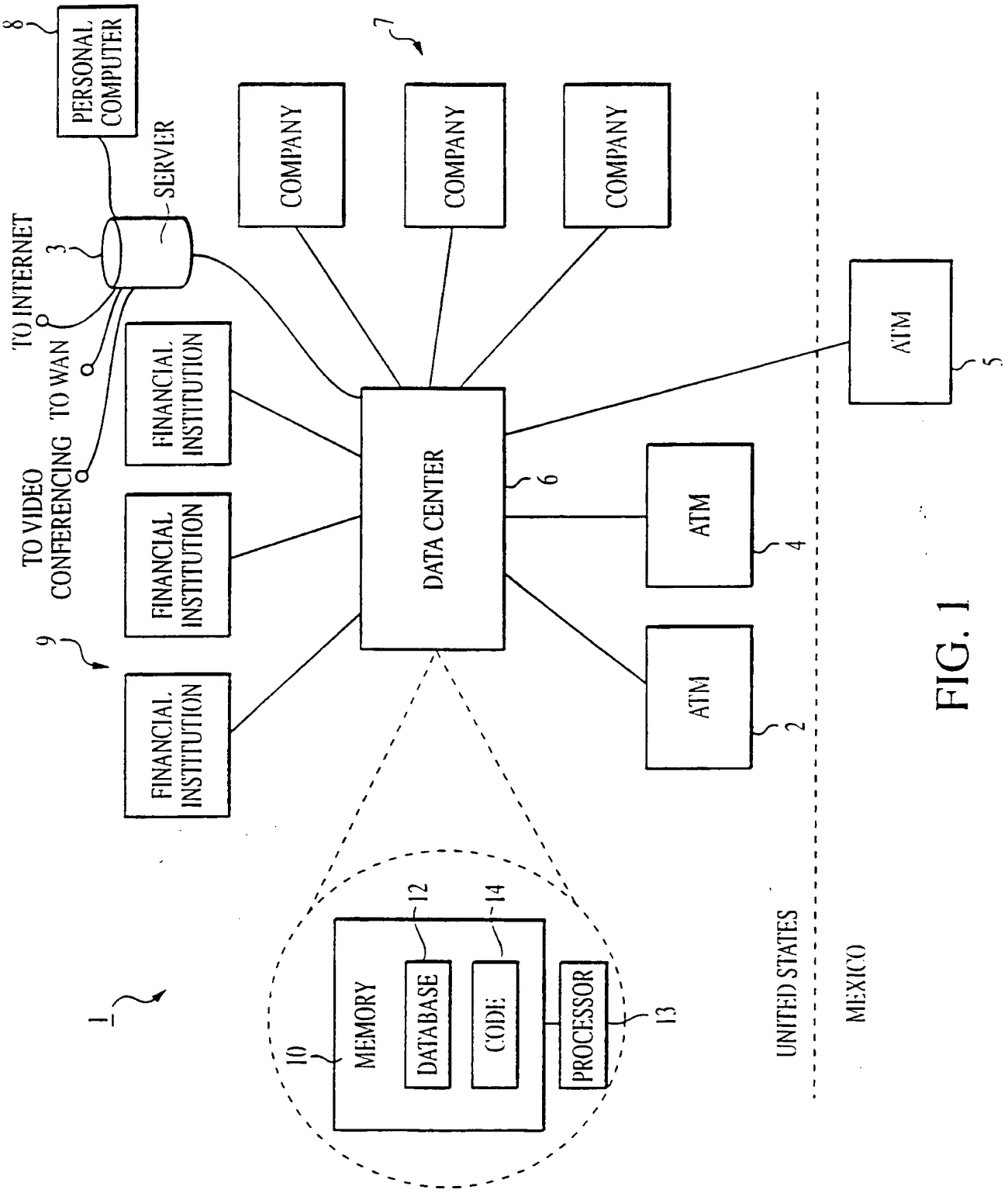

FIG. 1

BNSDOCID <WO 0075889A2 I >

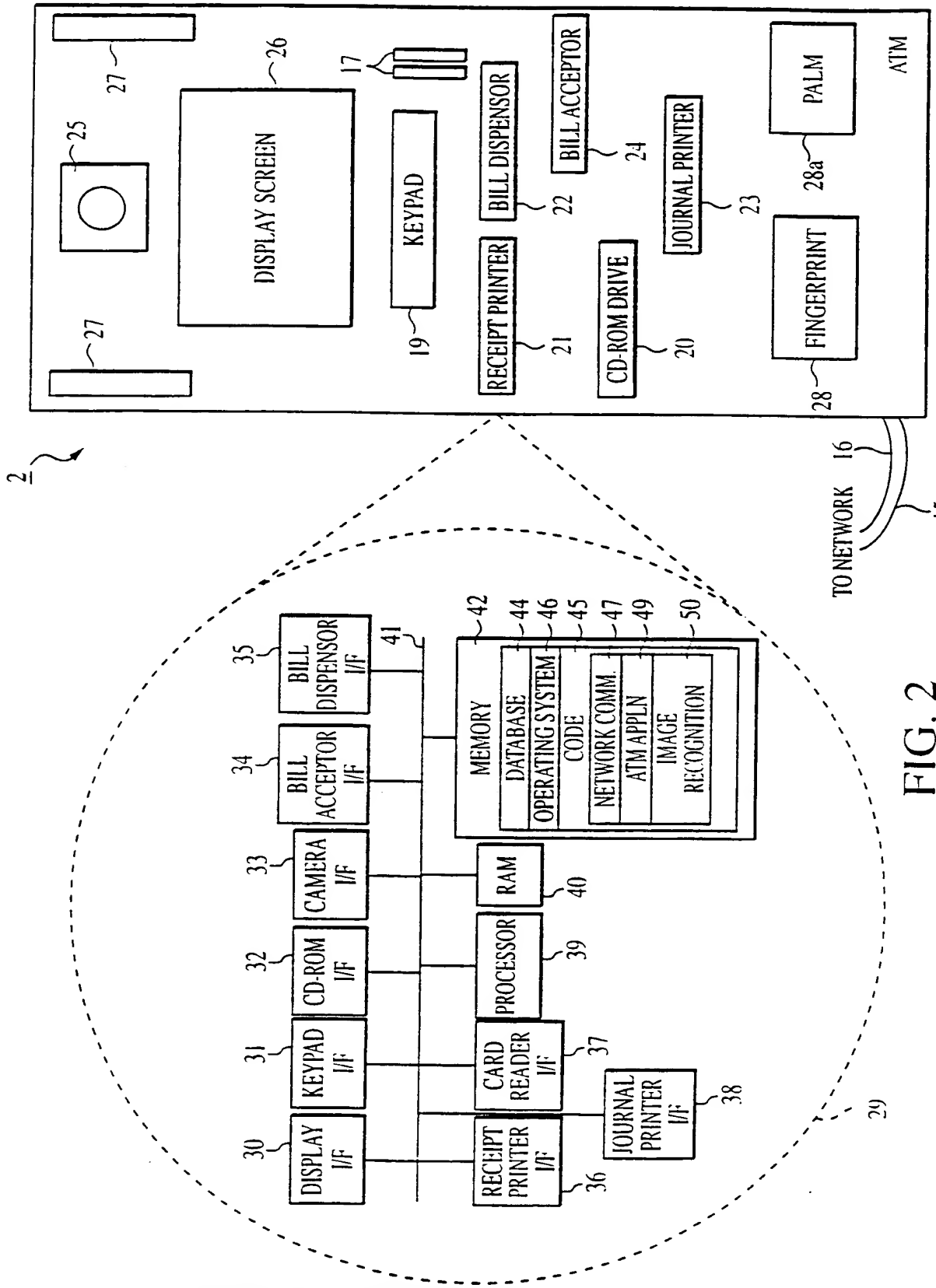
ATM
2
27
25
26
DISPLAY SCREEN
17
KEYPAD
19
BILL DISPENSOR
22
BILL ACCEPTOR
24
JOURNAL PRINTER
23
PALM
28a
RECEIPT PRINTER
21
CD-ROM DRIVE
20
FINGERPRINT
28
16
TO NETWORK
15
29
DISPLAY I/F
30
KEYPAD I/F
31
CD-ROM I/F
32
CAMERA I/F
33
BILL ACCEPTOR I/F
34
BILL DISPENSOR I/F
35
RECEIPT PRINTER I/F
36
CARD READER I/F
37
JOURNAL PRINTER I/F
38
PROCESSOR
39
RAM
40
41
MEMORY
42
DATABASE
44
OPERATING SYSTEM
46
CODE
45
NETWORK COMM.
47
ATM APPLN
49
IMAGE RECOGNITION
50

FIG. 2

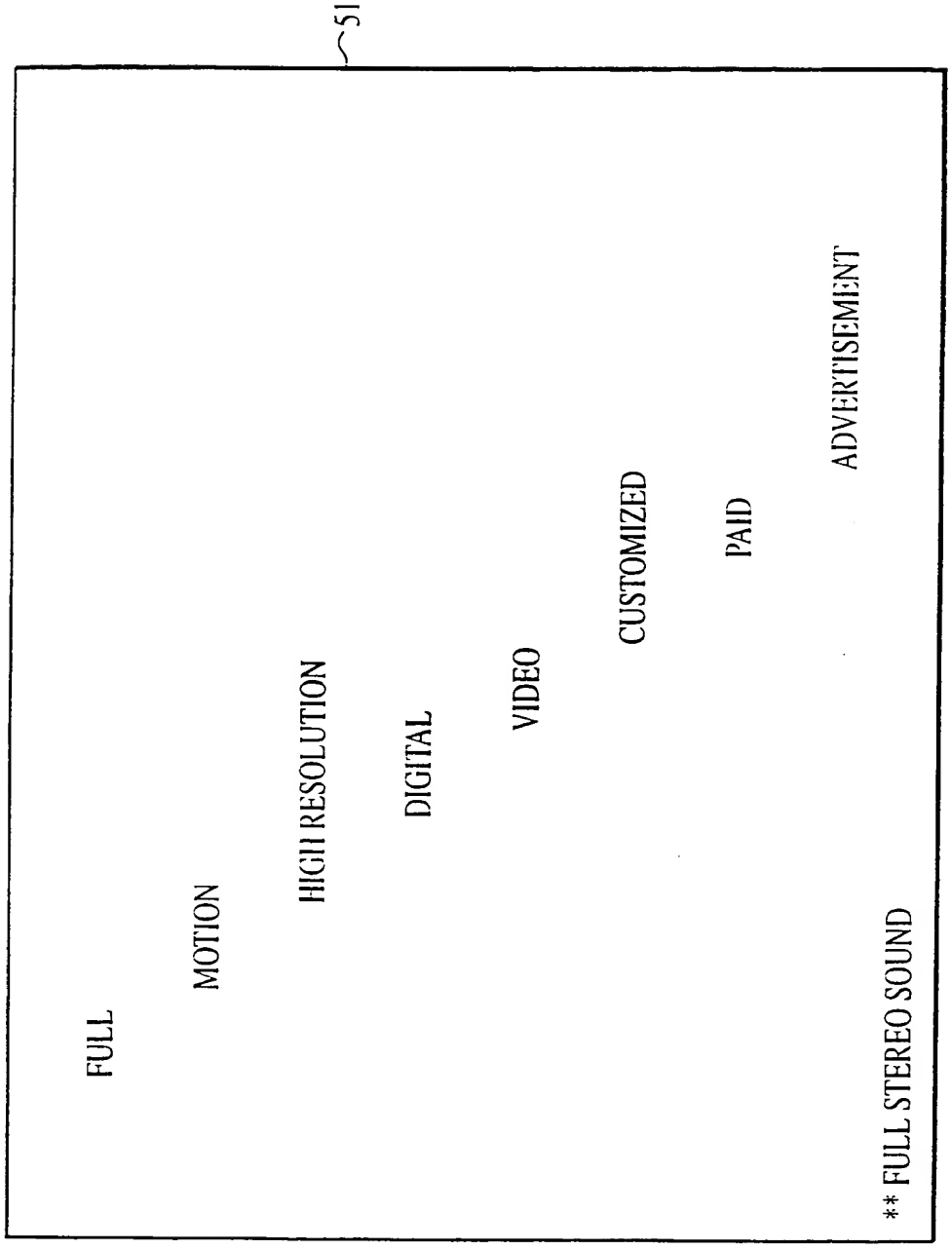
51
FULL
MOTION
HIGH RESOLUTION
DIGITAL
VIDEO
CUSTOMIZED
PAID
ADVERTISEMENT
** FULL STEREO SOUND

FIG. 3

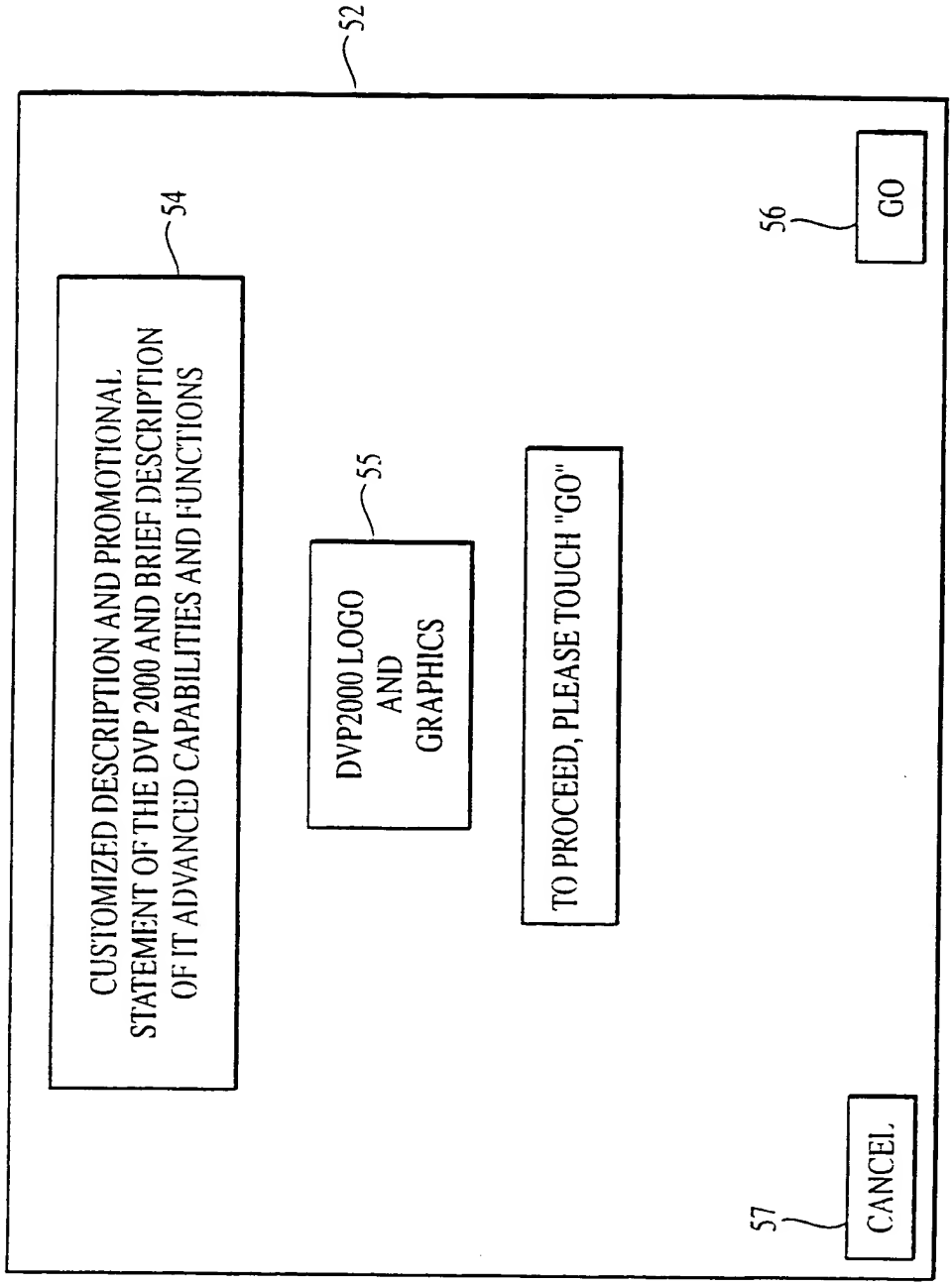
52
54
CUSTOMIZED DESCRIPTION AND PROMOTIONAL STATEMENT OF THE DVP 2000 AND BRIEF DESCRIPTION OF IT ADVANCED CAPABILITIES AND FUNCTIONS
55
DVP2000 LOGO AND GRAPHICS
TO PROCEED, PLEASE TOUCH "GO"
56
GO
57
CANCEL

FIG. 4

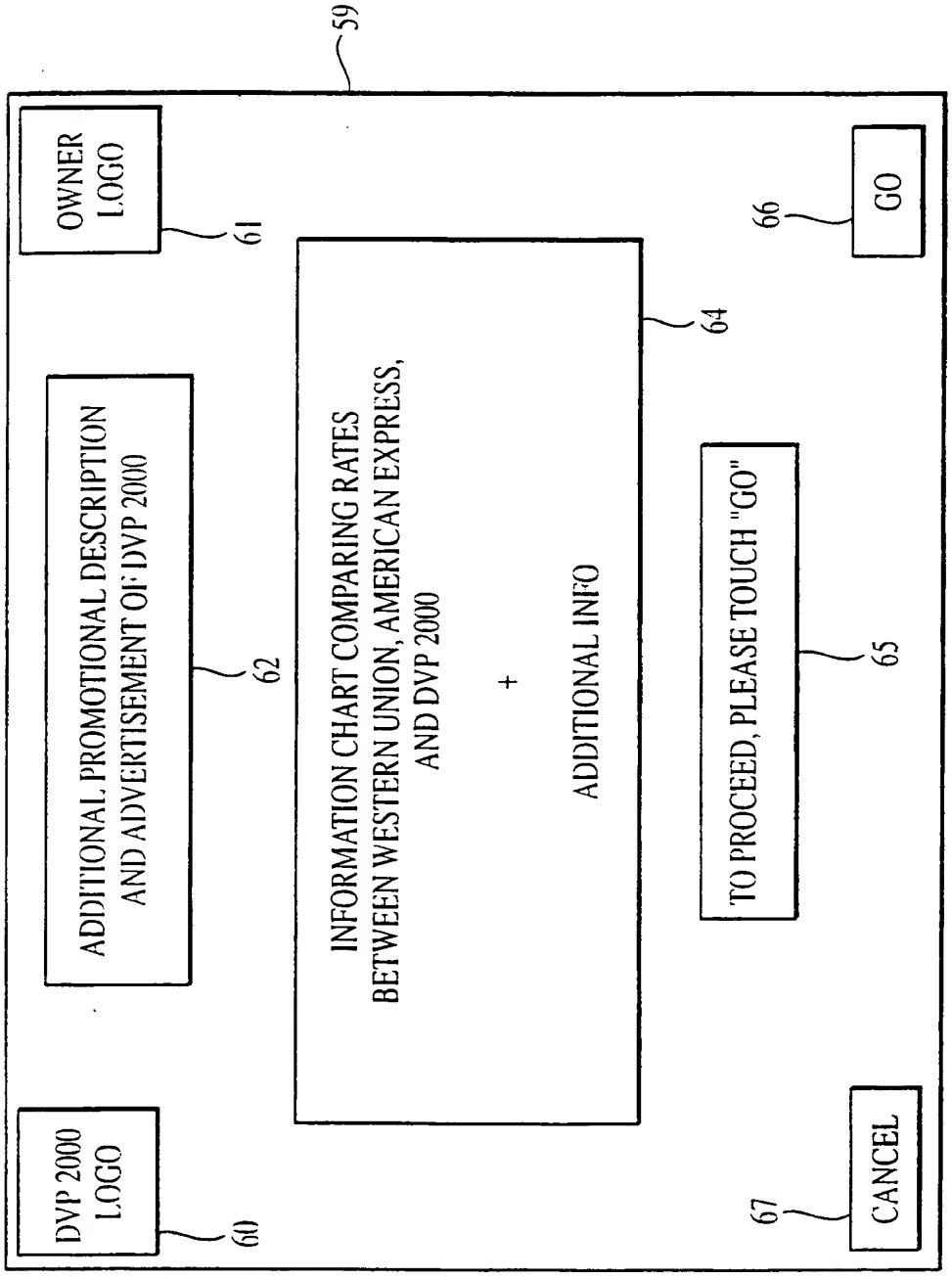
59
OWNER LOGO
61
GO
66
ADDITIONAL PROMOTIONAL DESCRIPTION AND ADVERTISEMENT OF DVP 2000
62
INFORMATION CHART COMPARING RATES BETWEEN WESTERN UNION, AMERICAN EXPRESS, AND DVP 2000
+
ADDITIONAL INFO
64
TO PROCEED, PLEASE TOUCH "GO"
65
DVP 2000 LOGO
60
67
CANCEL

FIG. 5

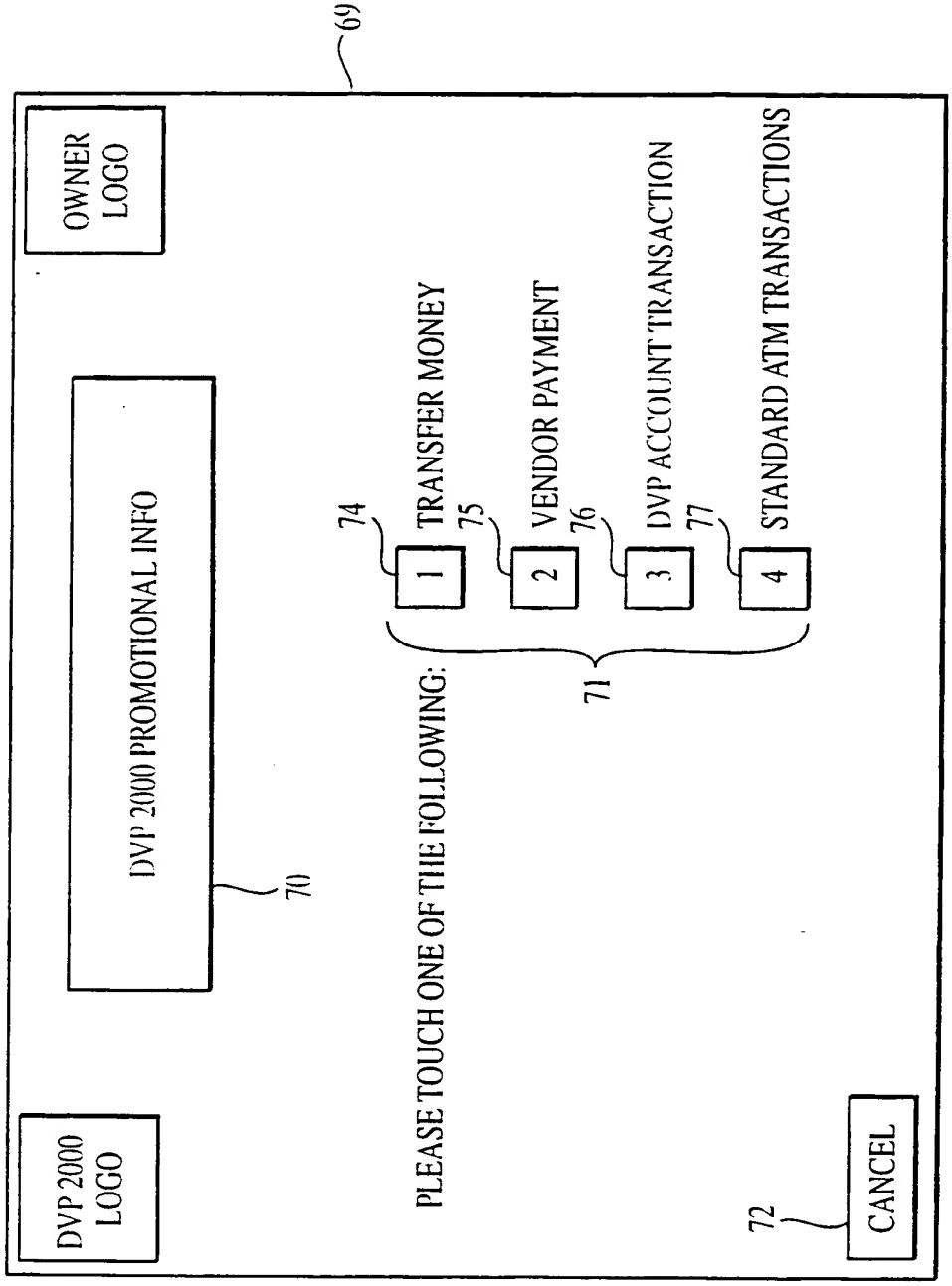
69
OWNER LOGO
DVP 2000 PROMOTIONAL INFO
70
PLEASE TOUCH ONE OF THE FOLLOWING:
74
1 TRANSFER MONEY
75
2 VENDOR PAYMENT
76
3 DVP ACCOUNT TRANSACTION
77
4 STANDARD ATM TRANSACTIONS
71
72
CANCEL
DVP 2000 LOGO

FIG. 6

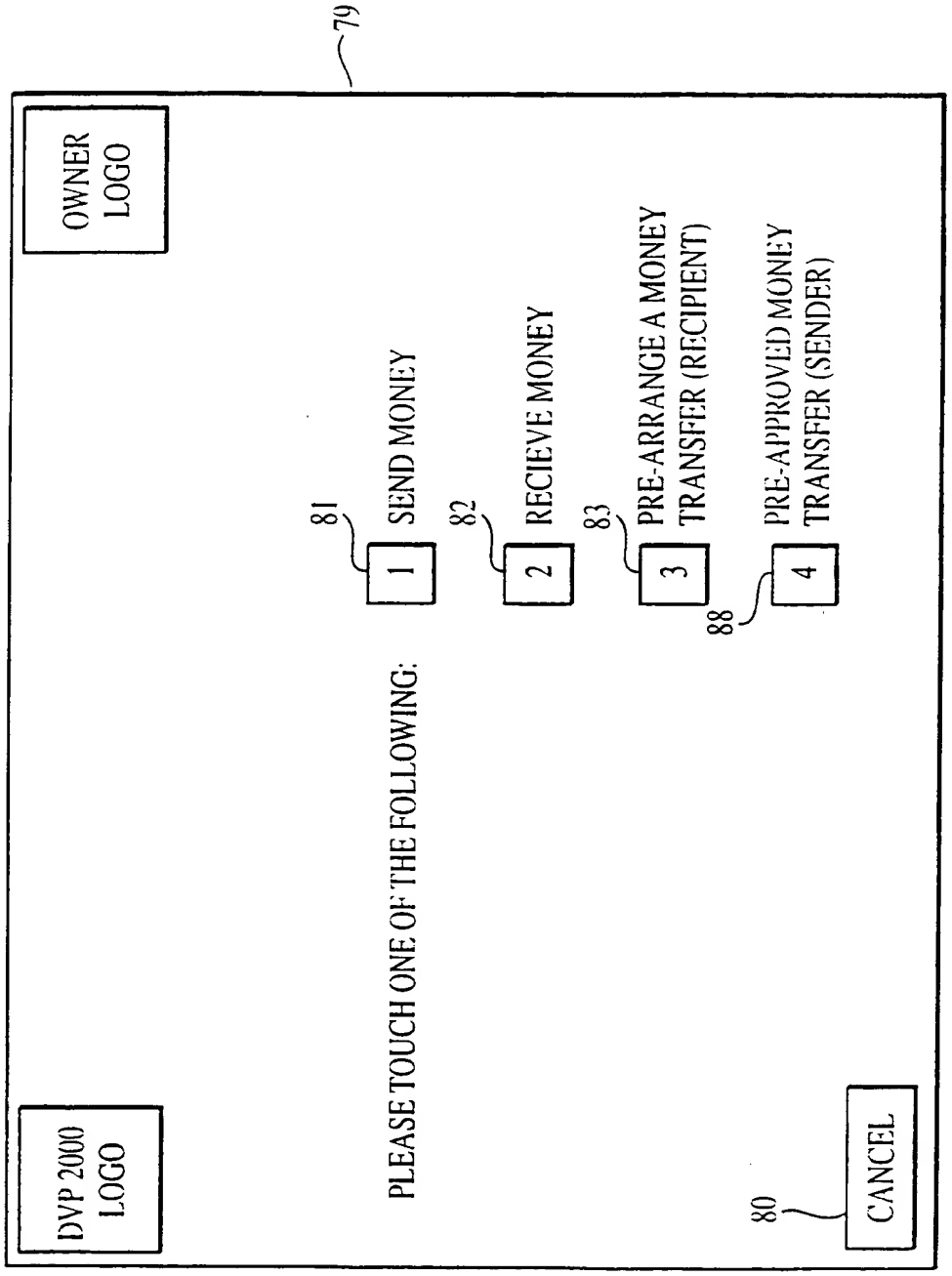
79
OWNER LOGO
81
1 SEND MONEY
82
2 RECIEVE MONEY
83
3 PRE-ARRANGE A MONEY TRANSFER (RECIPIENT)
88
4 PRE-APPROVED MONEY TRANSFER (SENDER)
PLEASE TOUCH ONE OF THE FOLLOWING:
DVP 2000 LOGO
80
CANCEL

FIG. 7

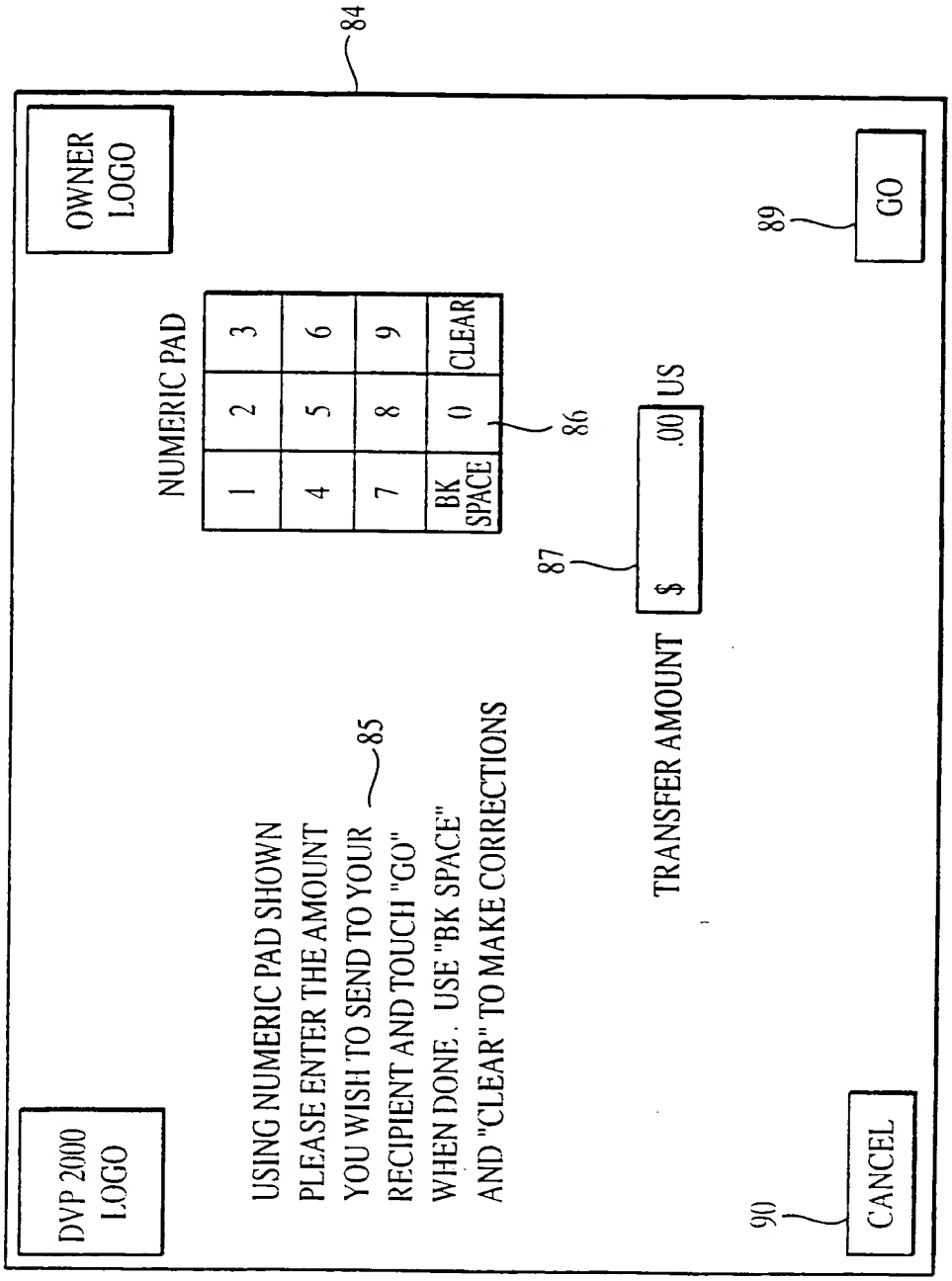
84
OWNER LOGO
NUMERIC PAD
1
2
3
4
5
6
7
8
9
BK SPACE
0
CLEAR
86
87
$
.00
US
TRANSFER AMOUNT
89
GO
DVP 2000 LOGO
USING NUMERIC PAD SHOWN
PLEASE ENTER THE AMOUNT
YOU WISH TO SEND TO YOUR
RECIPIENT AND TOUCH "GO"
WHEN DONE. USE "BK SPACE"
AND "CLEAR" TO MAKE CORRECTIONS
85
90
CANCEL

FIG. 8

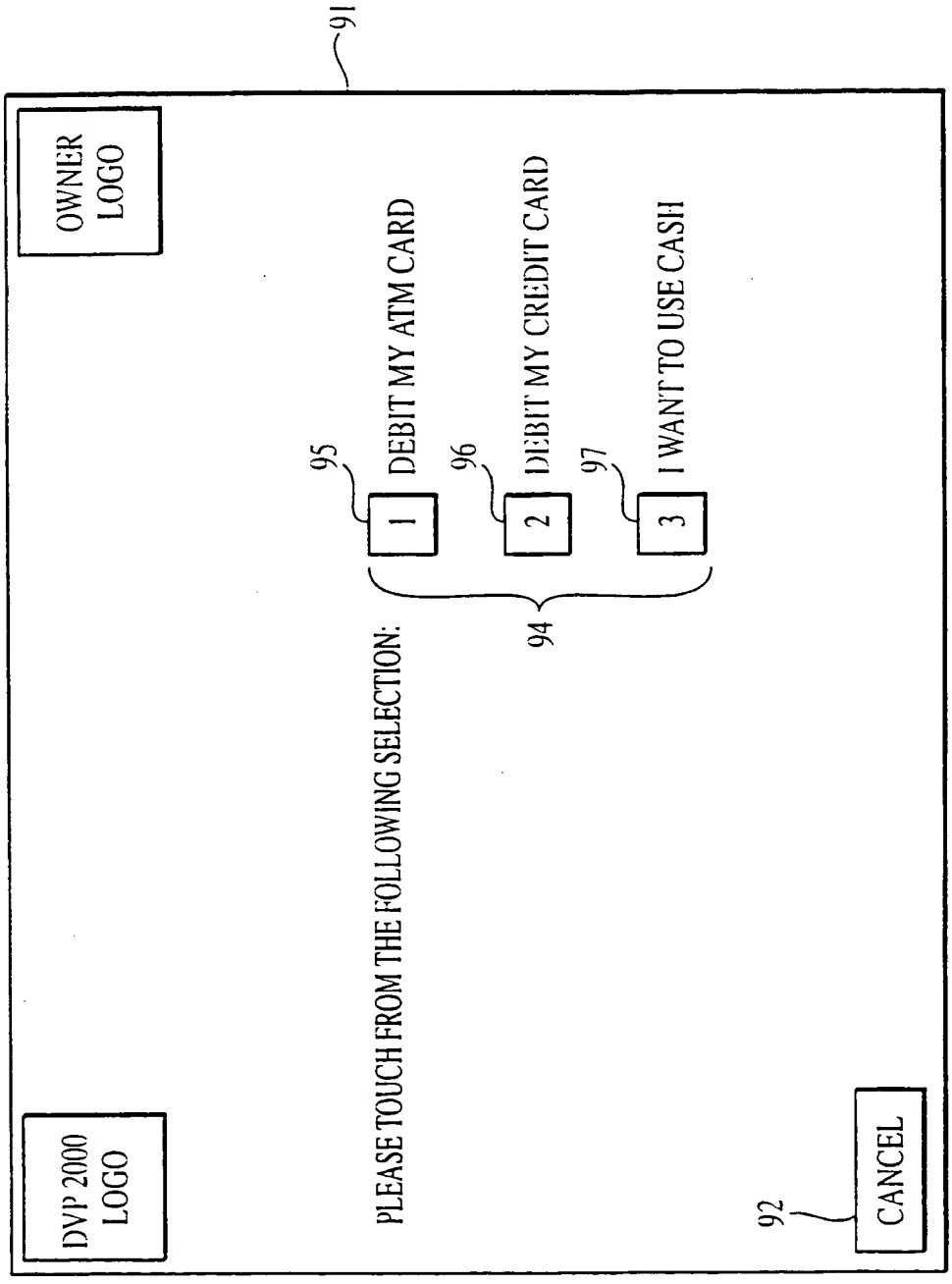
91
OWNER LOGO
DVP 2000 LOGO
PLEASE TOUCH FROM THE FOLLOWING SELECTION:
94
95
1
DEBIT MY ATM CARD
96
2
DEBIT MY CREDIT CARD
97
3
I WANT TO USE CASH
92
CANCEL

FIG. 9

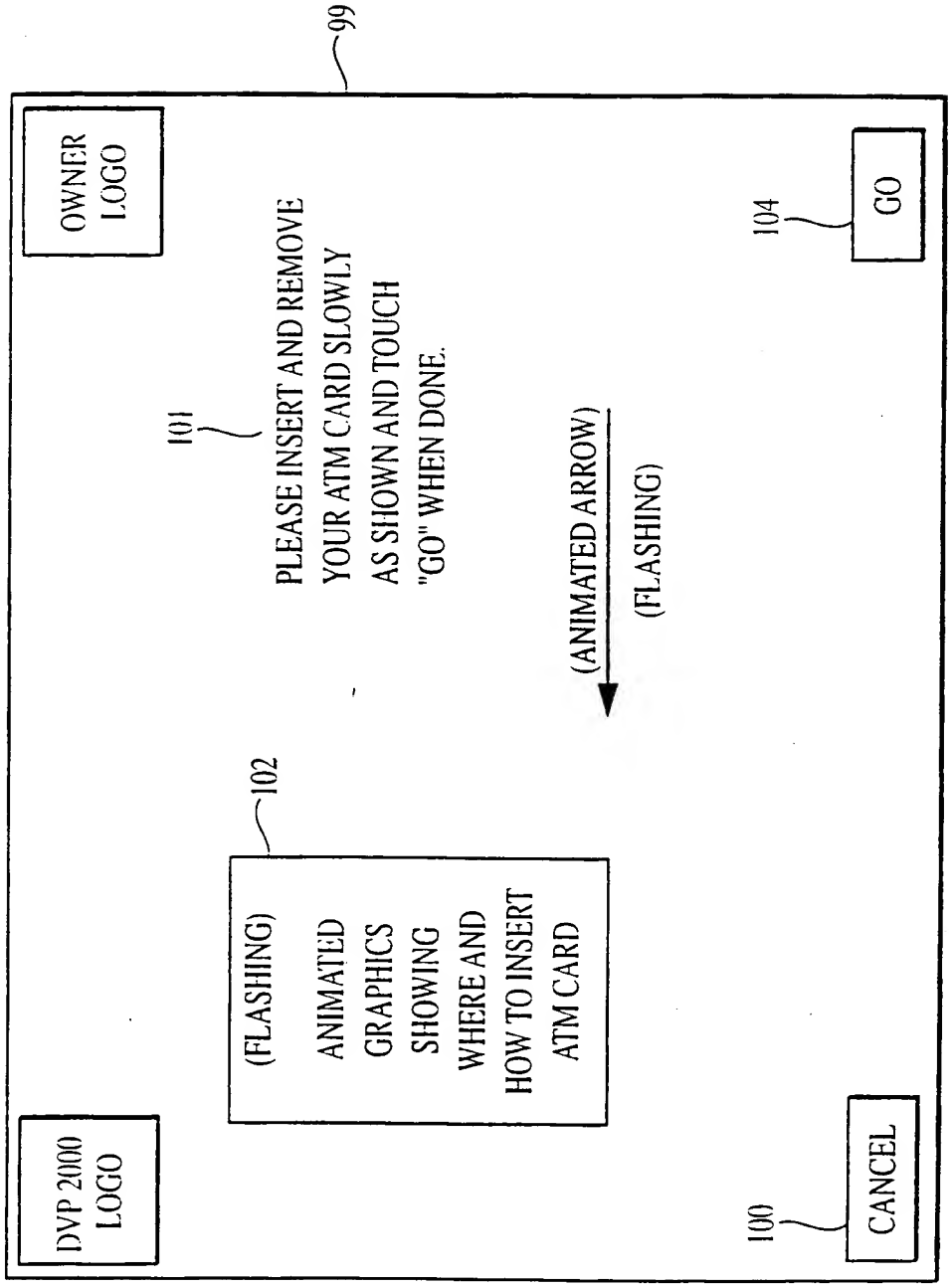
99
OWNER LOGO
101
PLEASE INSERT AND REMOVE YOUR ATM CARD SLOWLY AS SHOWN AND TOUCH "GO" WHEN DONE.
104
GO
(ANIMATED ARROW)
(FLASHING)
102
(FLASHING) ANIMATED GRAPHICS SHOWING WHERE AND HOW TO INSERT ATM CARD
DVP 2000 LOGO
100
CANCEL

FIG. 10

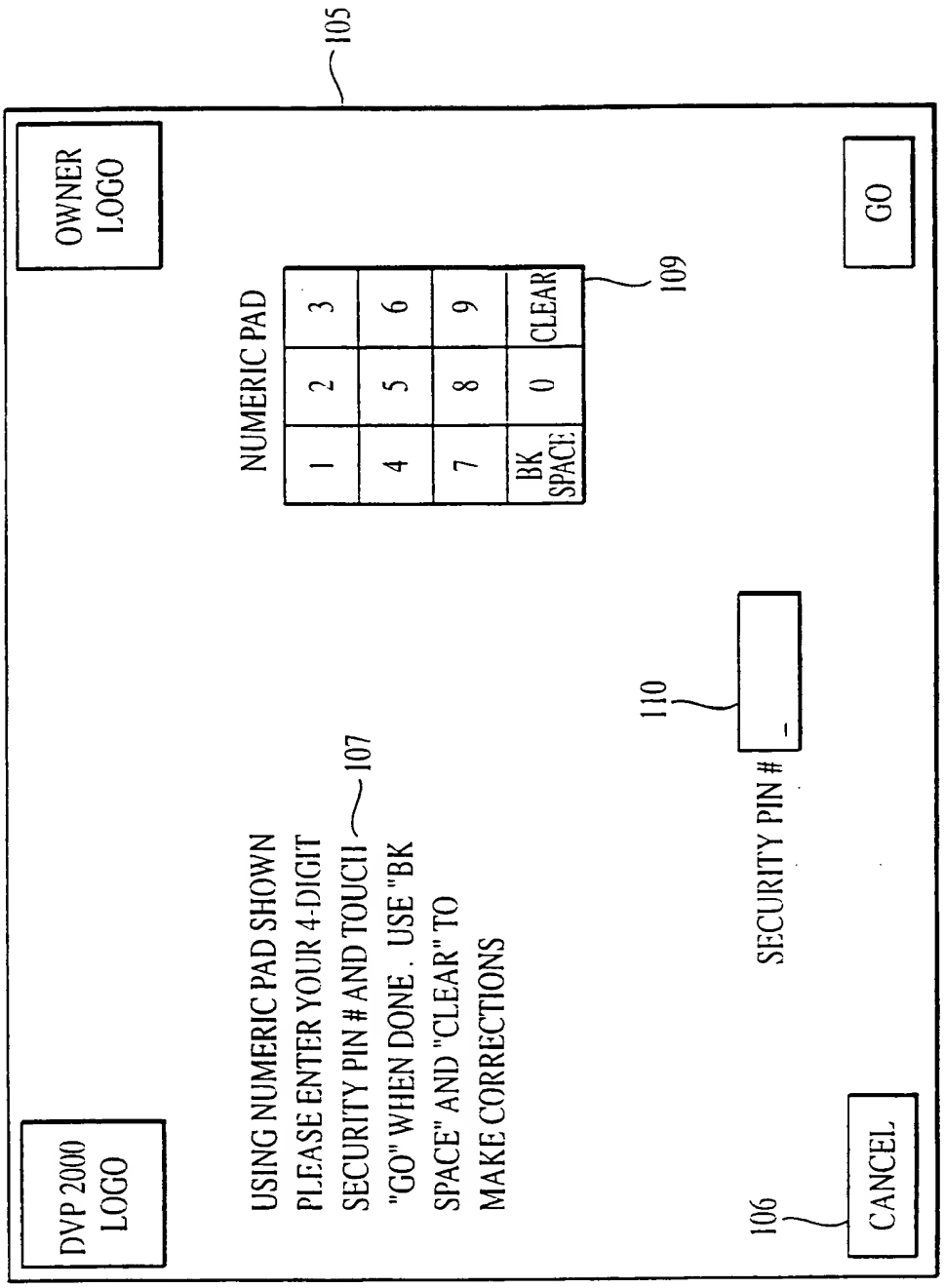
105
OWNER LOGO
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
109
GO
USING NUMERIC PAD SHOWN
PLEASE ENTER YOUR 4-DIGIT
SECURITY PIN # AND TOUCH
"GO" WHEN DONE. USE "BK
SPACE" AND "CLEAR" TO
MAKE CORRECTIONS
107
110
SECURITY PIN # _
DVP 2000 LOGO
106
CANCEL

FIG. 11

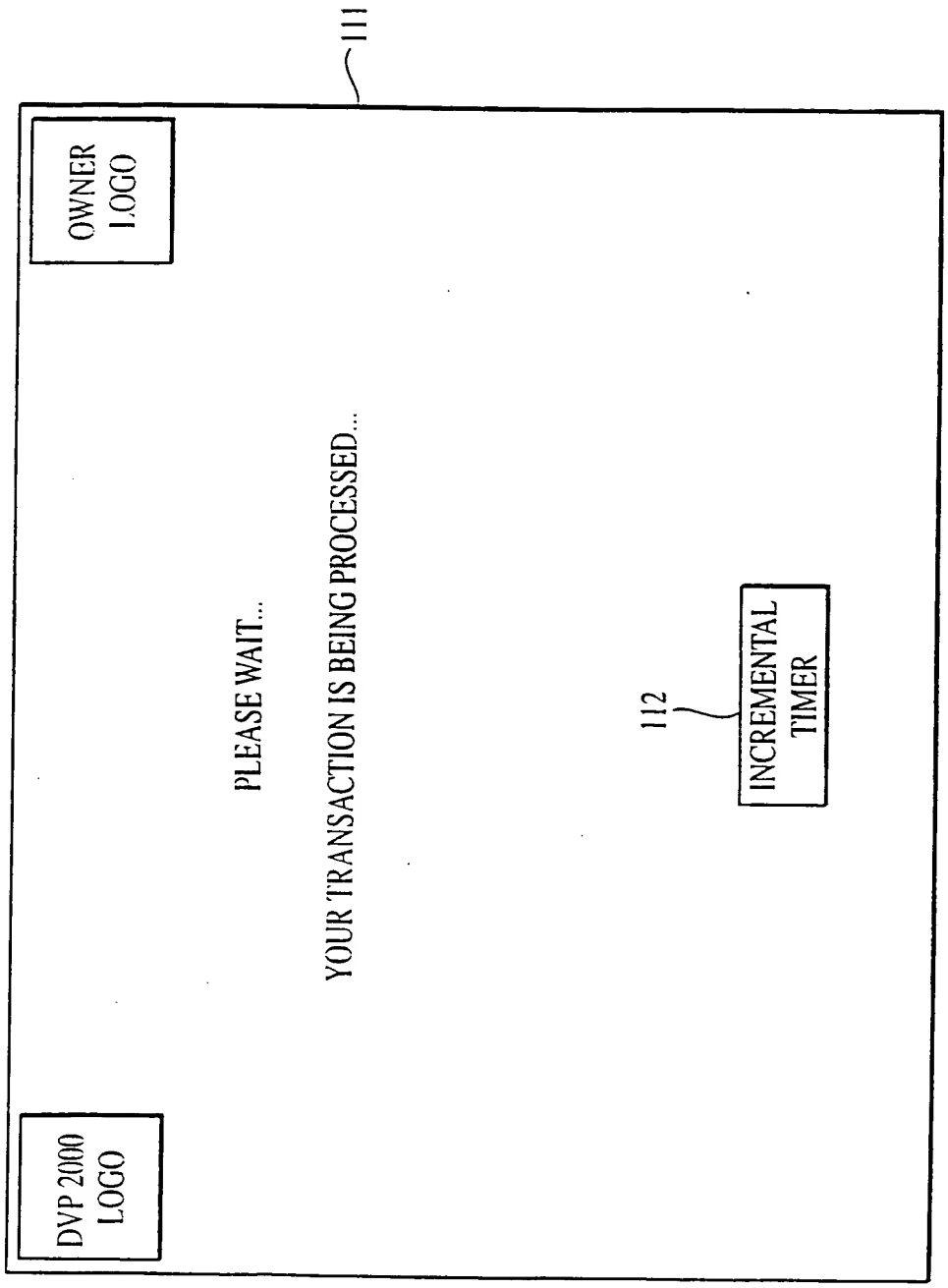
111
OWNER LOGO
PLEASE WAIT...
YOUR TRANSACTION IS BEING PROCESSED...
112
INCREMENTAL TIMER
DVP 2000 LOGO

FIG. 12

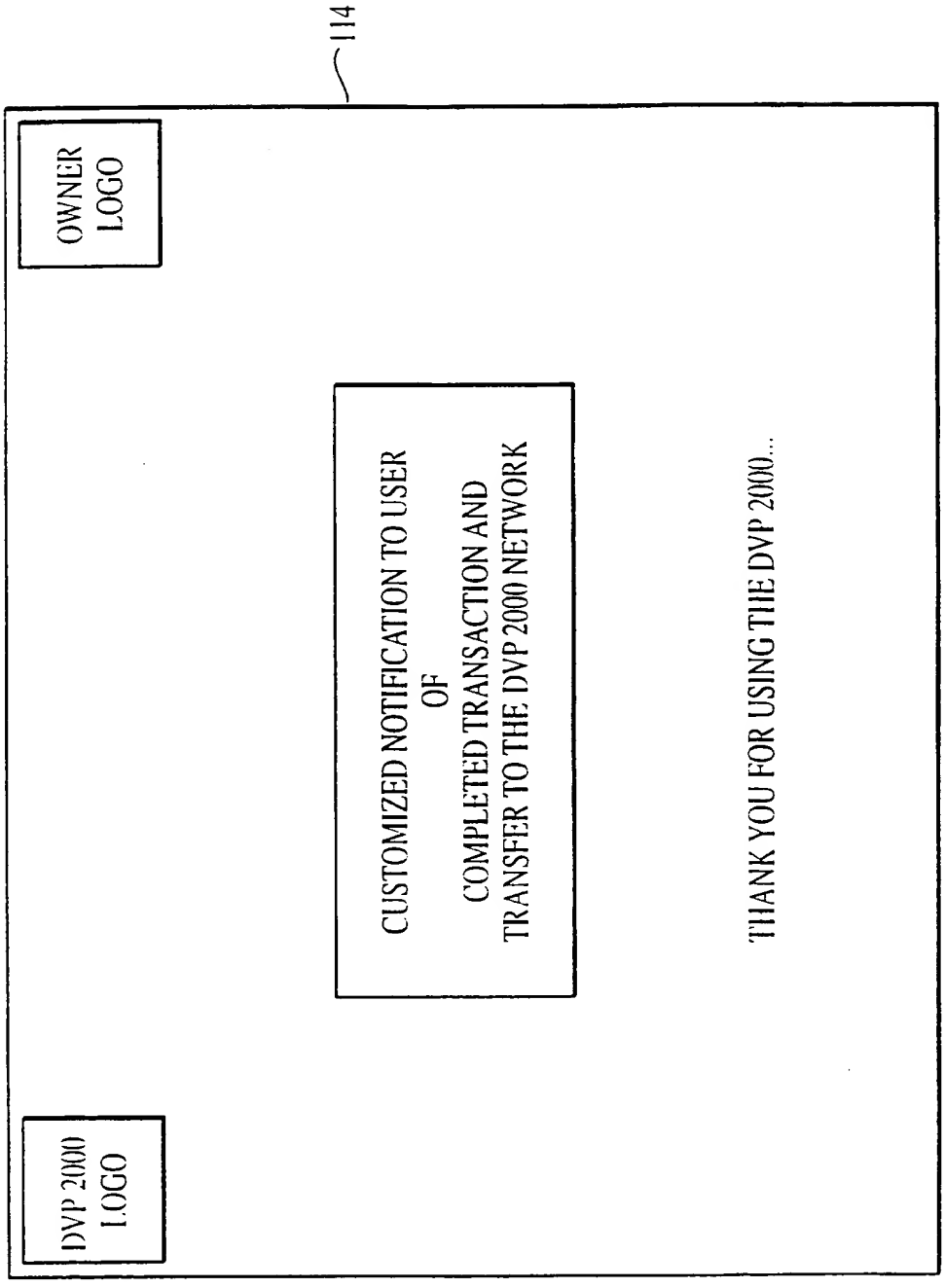
114
OWNER LOGO
CUSTOMIZED NOTIFICATION TO USER OF COMPLETED TRANSACTION AND TRANSFER TO THE DVP 2000 NETWORK
THANK YOU FOR USING THE DVP 2000...
DVP 2000 LOGO

FIG. 13

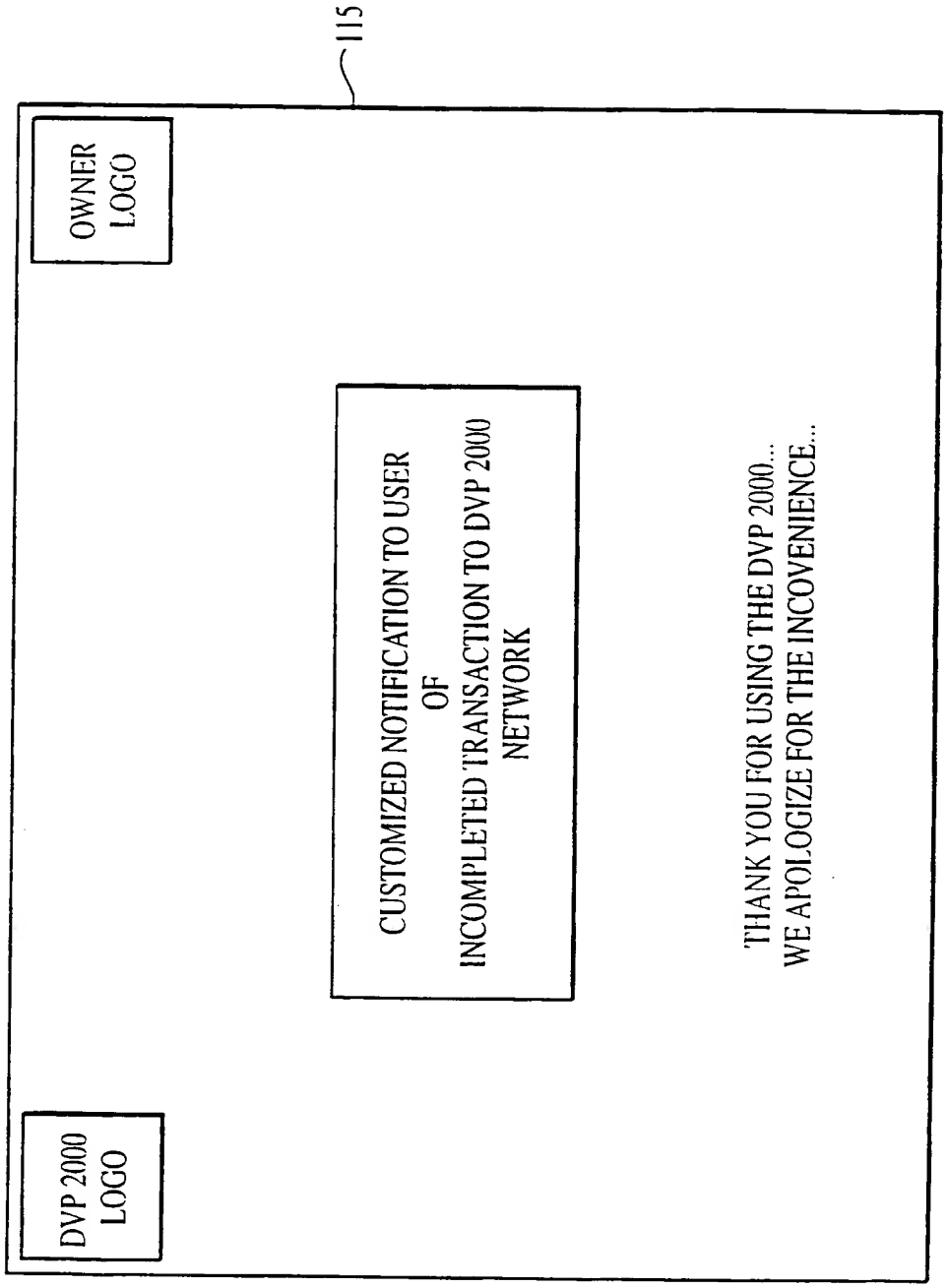
115
OWNER LOGO
CUSTOMIZED NOTIFICATION TO USER OF INCOMPLETED TRANSACTION TO DVP 2000 NETWORK
THANK YOU FOR USING THE DVP 2000... WE APOLOGIZE FOR THE INCOVENIENCE...
DVP 2000 LOGO

FIG. 14

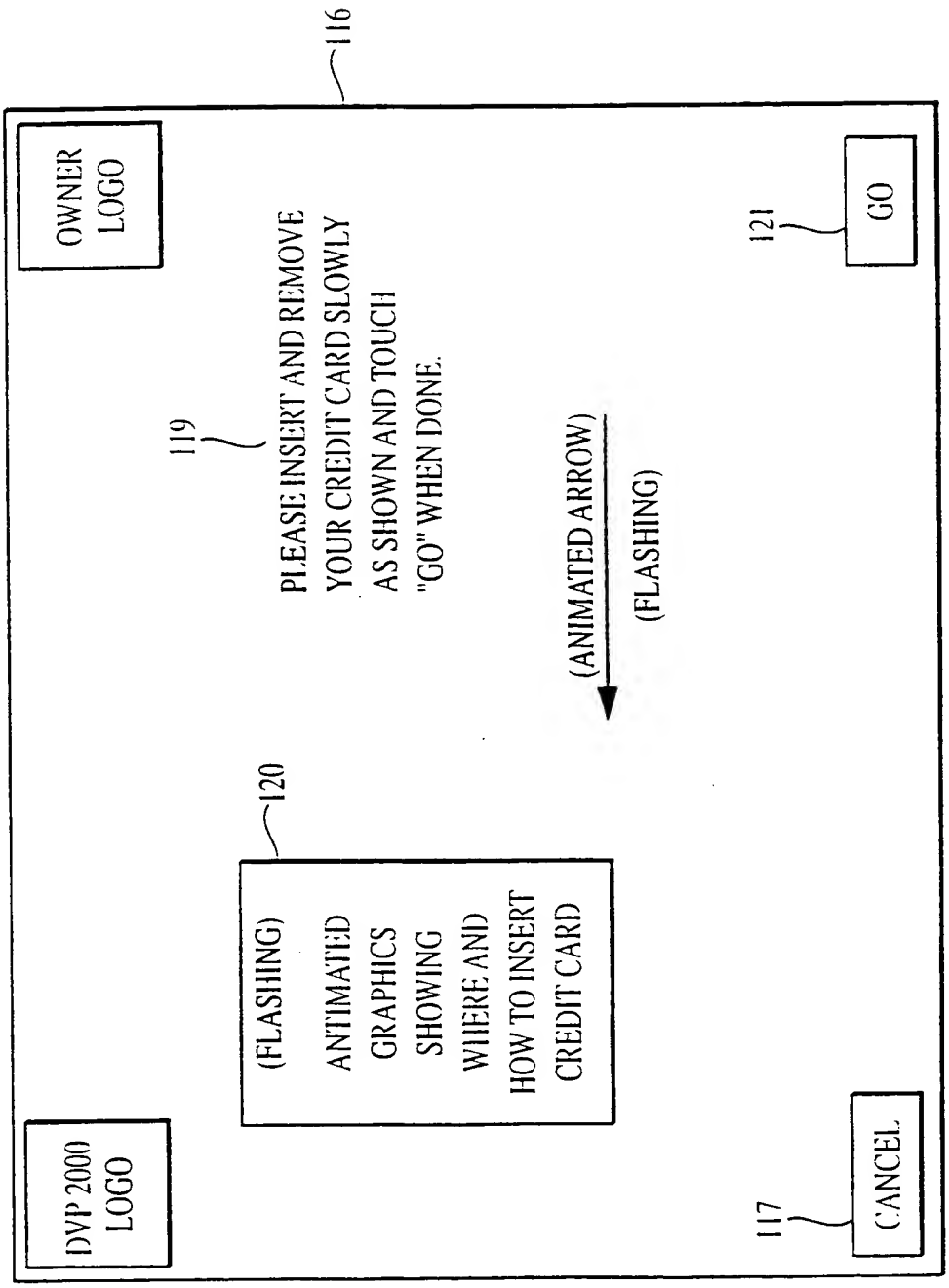
116
OWNER LOGO
119
PLEASE INSERT AND REMOVE YOUR CREDIT CARD SLOWLY AS SHOWN AND TOUCH "GO" WHEN DONE.
121
GO
(ANIMATED ARROW)
(FLASHING)
120
(FLASHING) ANIMATED GRAPHICS SHOWING WHERE AND HOW TO INSERT CREDIT CARD
DVP 2000 LOGO
117
CANCEL

FIG. 15

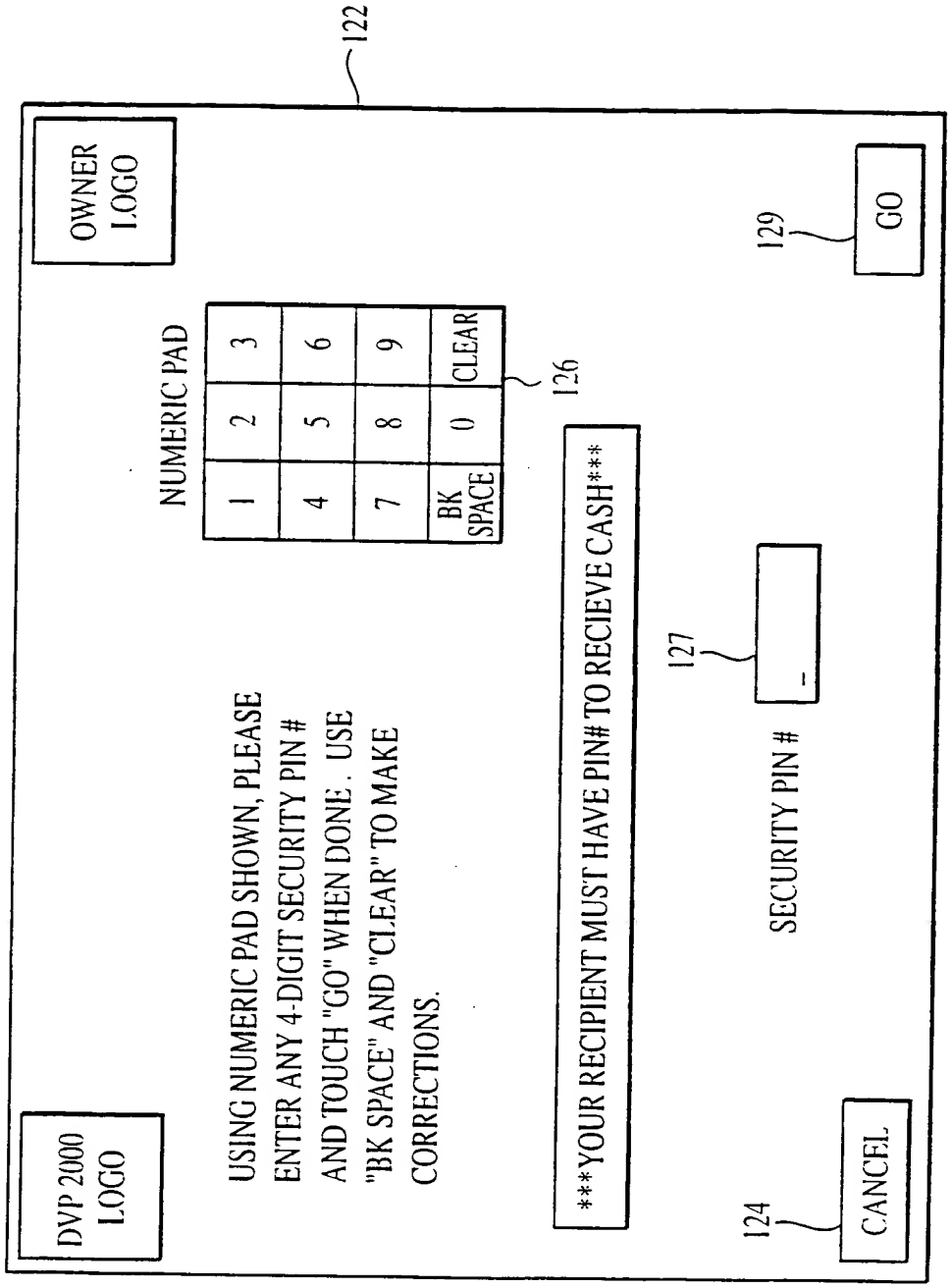
122
OWNER LOGO
NUMERIC PAD
1
2
3
4
5
6
7
8
9
BK SPACE
0
CLEAR
126
129
GO
USING NUMERIC PAD SHOWN, PLEASE ENTER ANY 4-DIGIT SECURITY PIN # AND TOUCH "GO" WHEN DONE. USE "BK SPACE" AND "CLEAR" TO MAKE CORRECTIONS.
YOUR RECIPIENT MUST HAVE PIN# TO RECIEVE CASH
127
SECURITY PIN #
_
DVP 2000 LOGO
124
CANCEL

FIG. 16

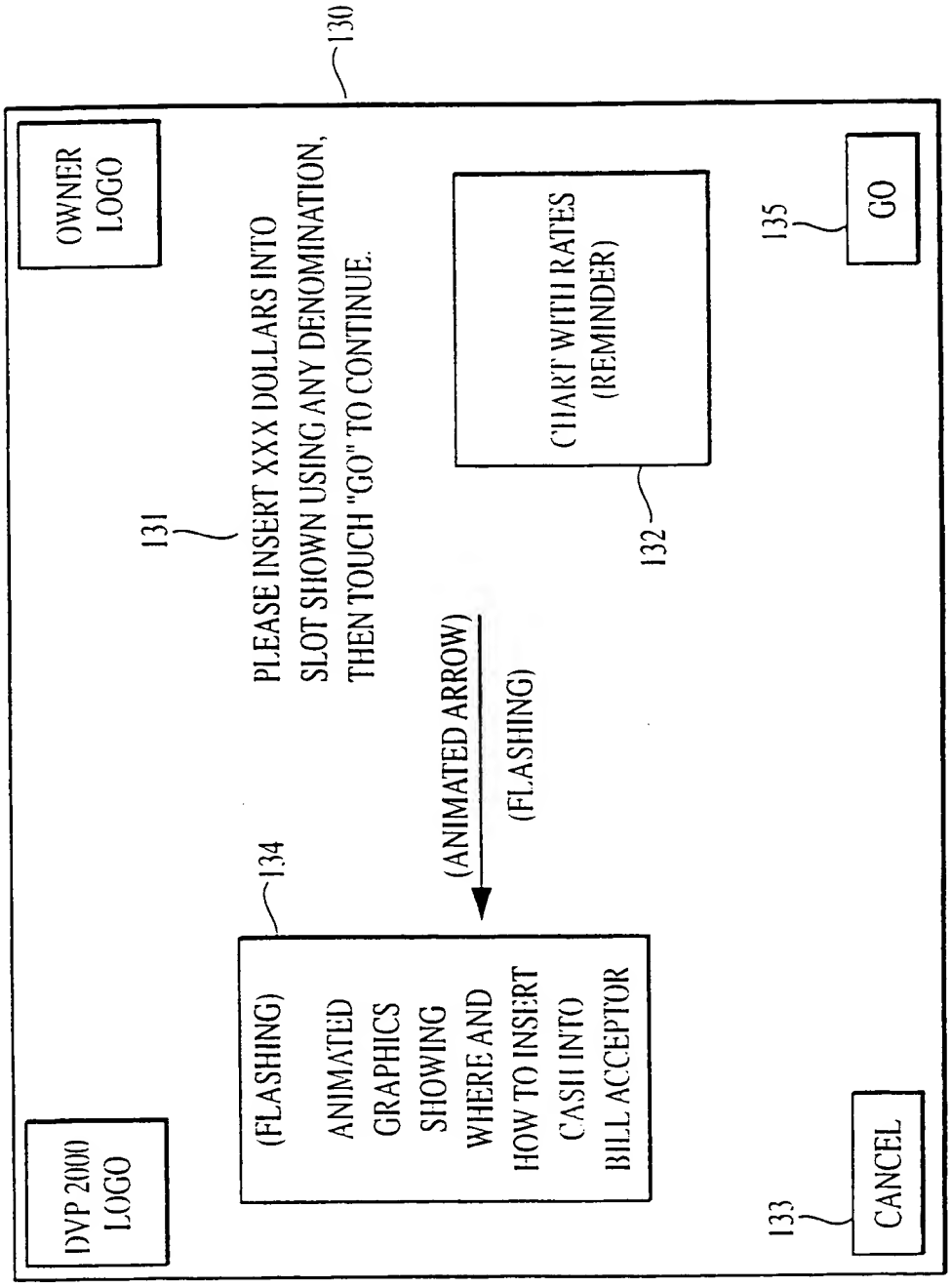
130
OWNER LOGO
131
PLEASE INSERT XXX DOLLARS INTO SLOT SHOWN USING ANY DENOMINATION, THEN TOUCH "GO" TO CONTINUE.
CHART WITH RATES (REMINDER)
132
135
GO
(ANIMATED ARROW)
(FLASHING)
134
(FLASHING) ANIMATED GRAPHICS SHOWING WHERE AND HOW TO INSERT CASH INTO BILL ACCEPTOR
DVP 2000 LOGO
133
CANCEL

FIG. 17

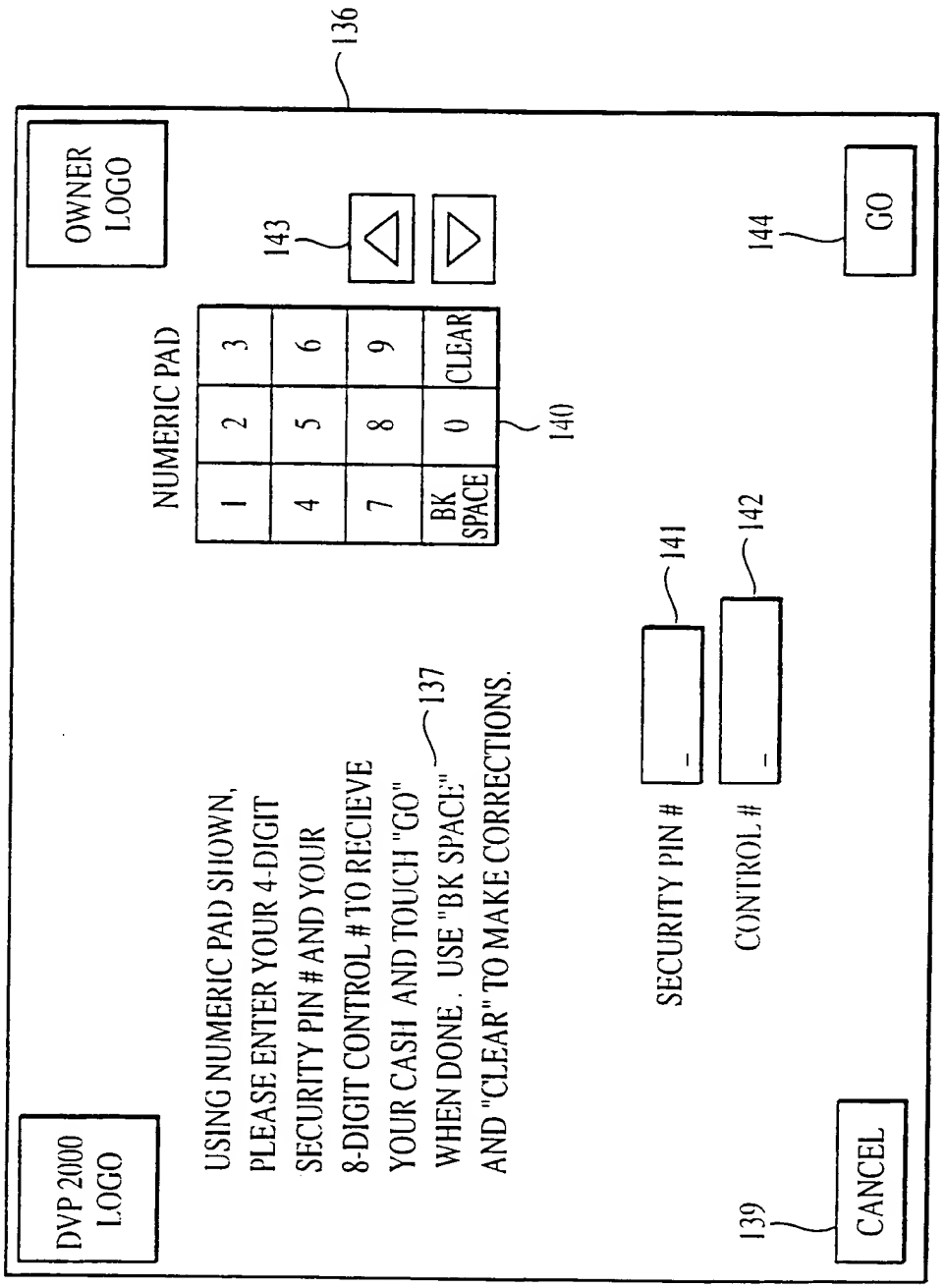
136
OWNER LOGO
143
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
140
144
GO
USING NUMERIC PAD SHOWN,
PLEASE ENTER YOUR 4-DIGIT
SECURITY PIN # AND YOUR
8-DIGIT CONTROL # TO RECIEVE
YOUR CASH AND TOUCH "GO"
WHEN DONE. USE "BK SPACE"
AND "CLEAR" TO MAKE CORRECTIONS.
137
141
142
SECURITY PIN #
CONTROL #
DVP 2000 LOGO
139
CANCEL

FIG. 18

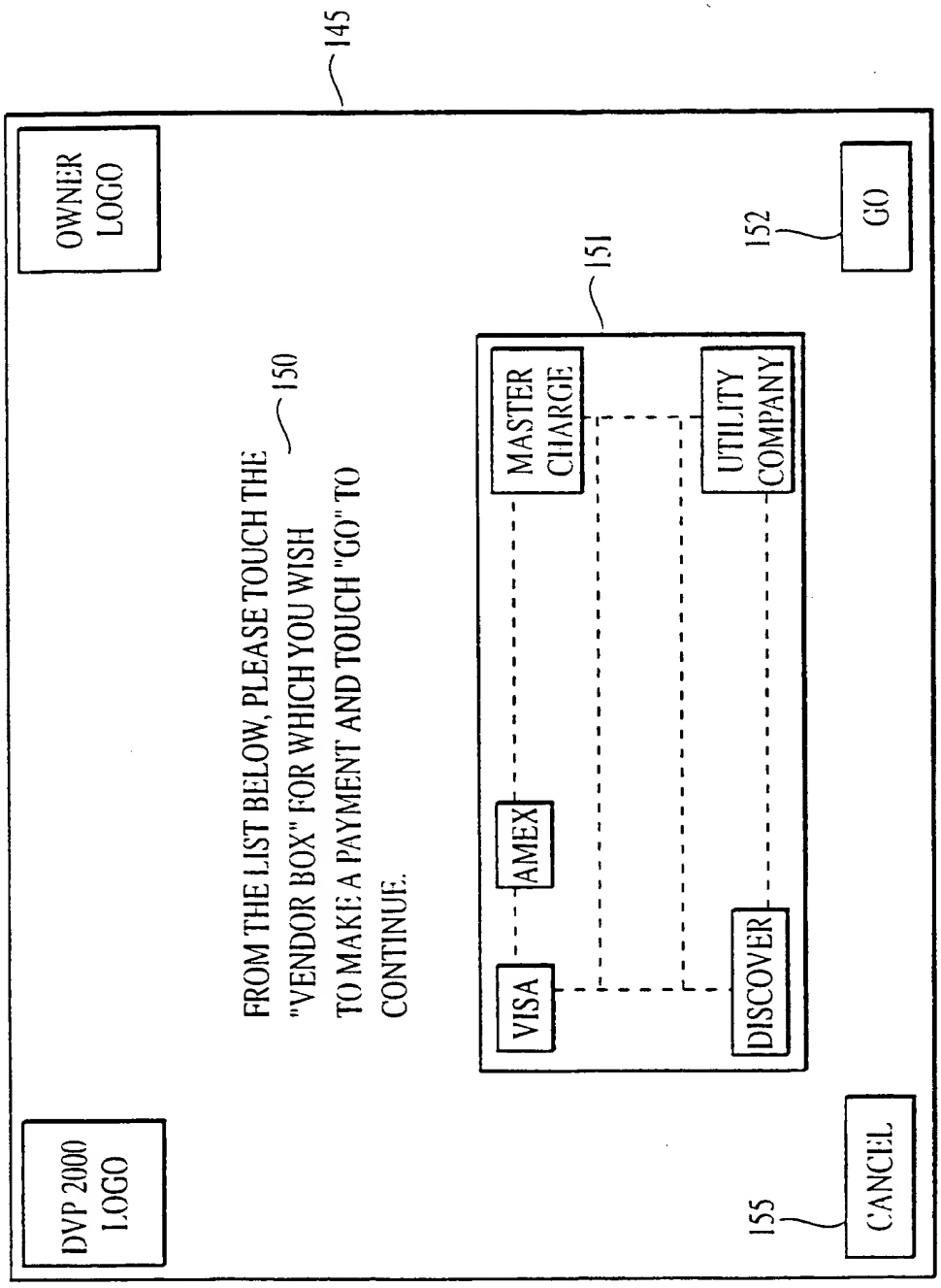
145
OWNER LOGO
FROM THE LIST BELOW, PLEASE TOUCH THE "VENDOR BOX" FOR WHICH YOU WISH TO MAKE A PAYMENT AND TOUCH "GO" TO CONTINUE.
150
151
MASTER CHARGE
UTILITY COMPANY
VISA
AMEX
DISCOVER
152
GO
DVP 2000 LOGO
155
CANCEL

FIG. 19

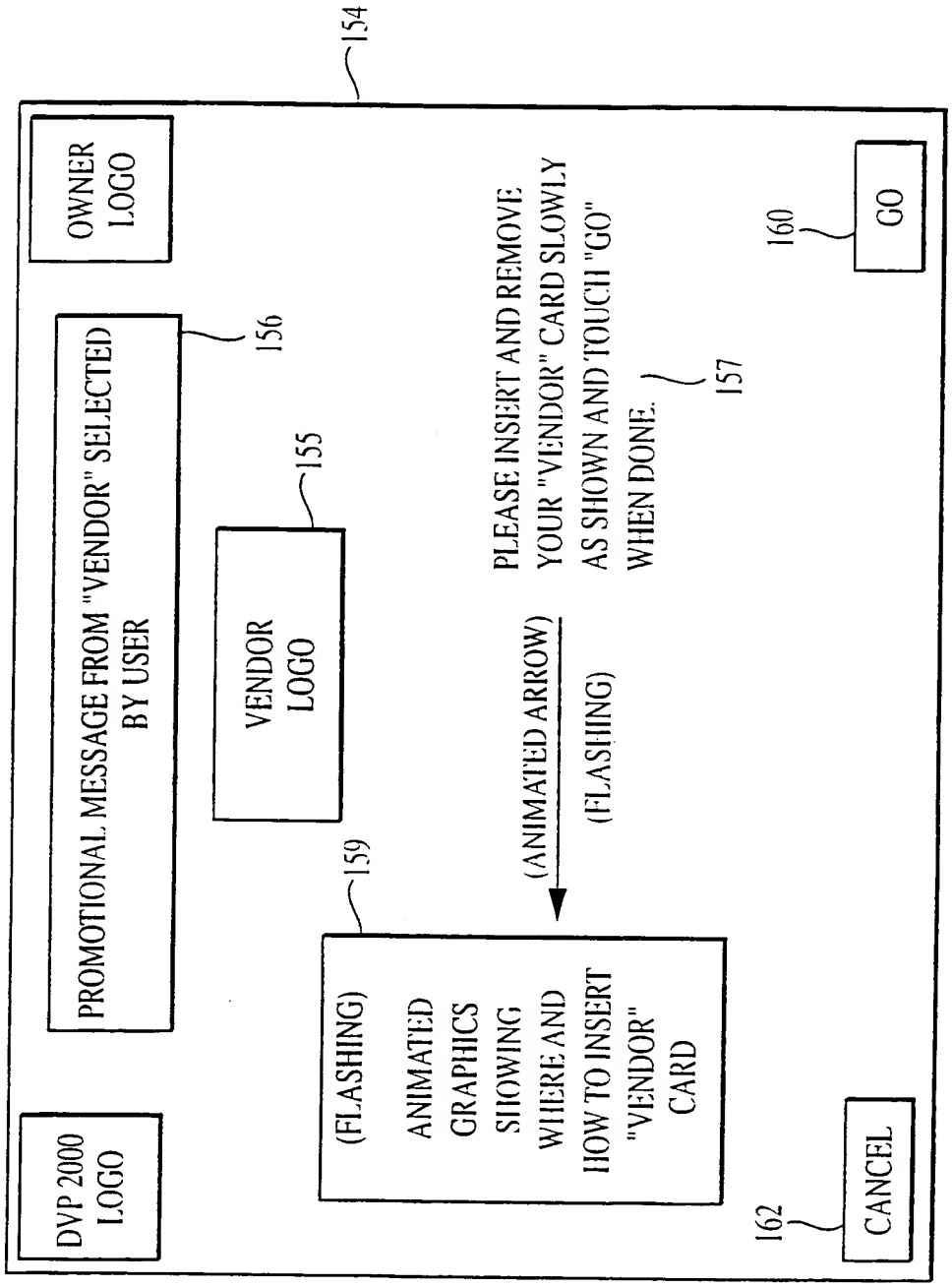
154
OWNER LOGO
PROMOTIONAL MESSAGE FROM "VENDOR" SELECTED BY USER
156
VENDOR LOGO
155
PLEASE INSERT AND REMOVE YOUR "VENDOR" CARD SLOWLY AS SHOWN AND TOUCH "GO" WHEN DONE.
157
160
GO
(ANIMATED ARROW)
(FLASHING)
159
(FLASHING) ANIMATED GRAPHICS SHOWING WHERE AND HOW TO INSERT "VENDOR" CARD
DVP 2000 LOGO
162
CANCEL

FIG. 20

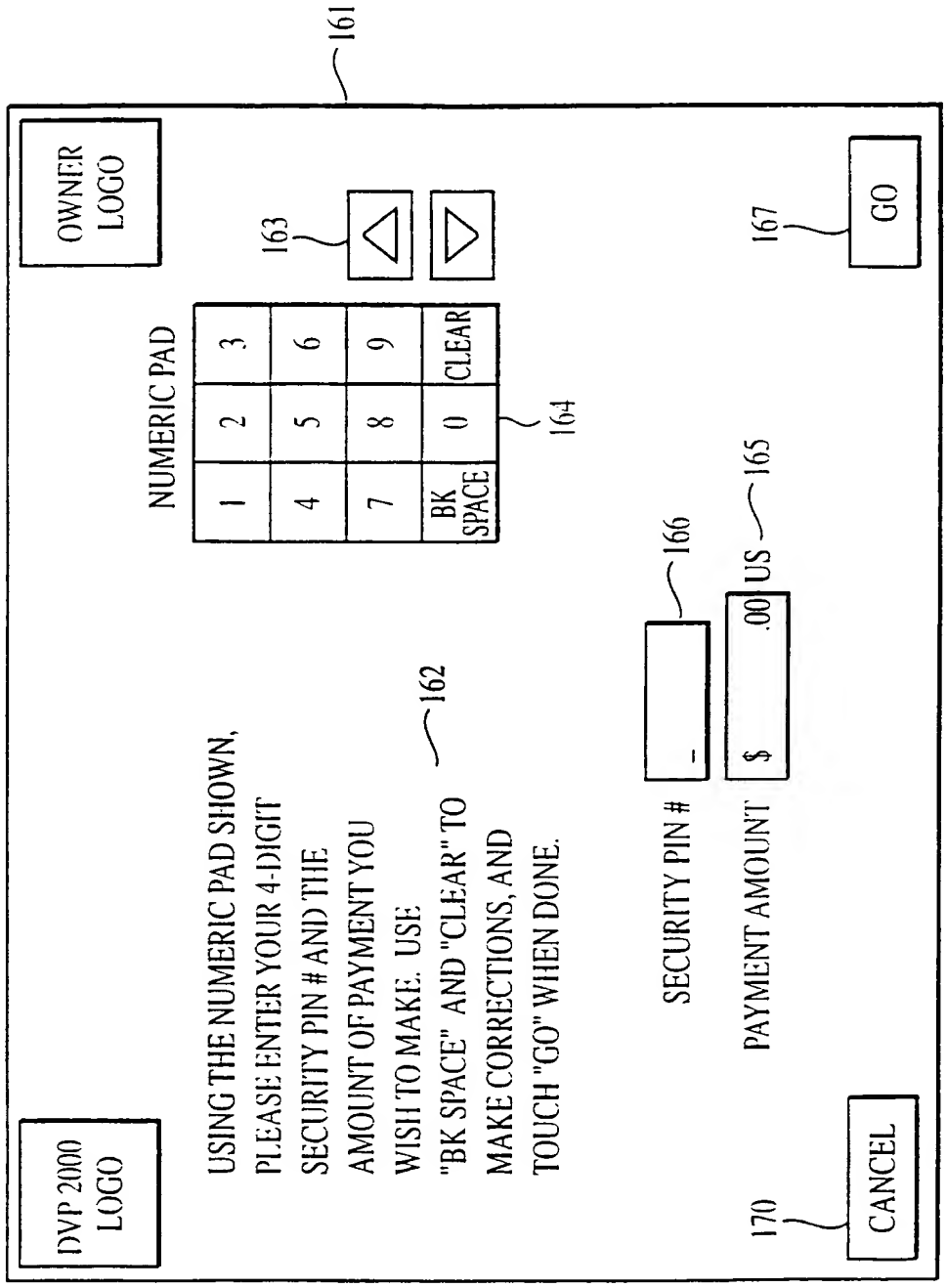
161
OWNER LOGO
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
163
164
167
GO
USING THE NUMERIC PAD SHOWN, PLEASE ENTER YOUR 4-DIGIT SECURITY PIN # AND THE AMOUNT OF PAYMENT YOU WISH TO MAKE. USE "BK SPACE" AND "CLEAR" TO MAKE CORRECTIONS, AND TOUCH "GO" WHEN DONE.
162
SECURITY PIN #
166
PAYMENT AMOUNT
$ .00 US
165
DVP 2000 LOGO
170
CANCEL

FIG. 21

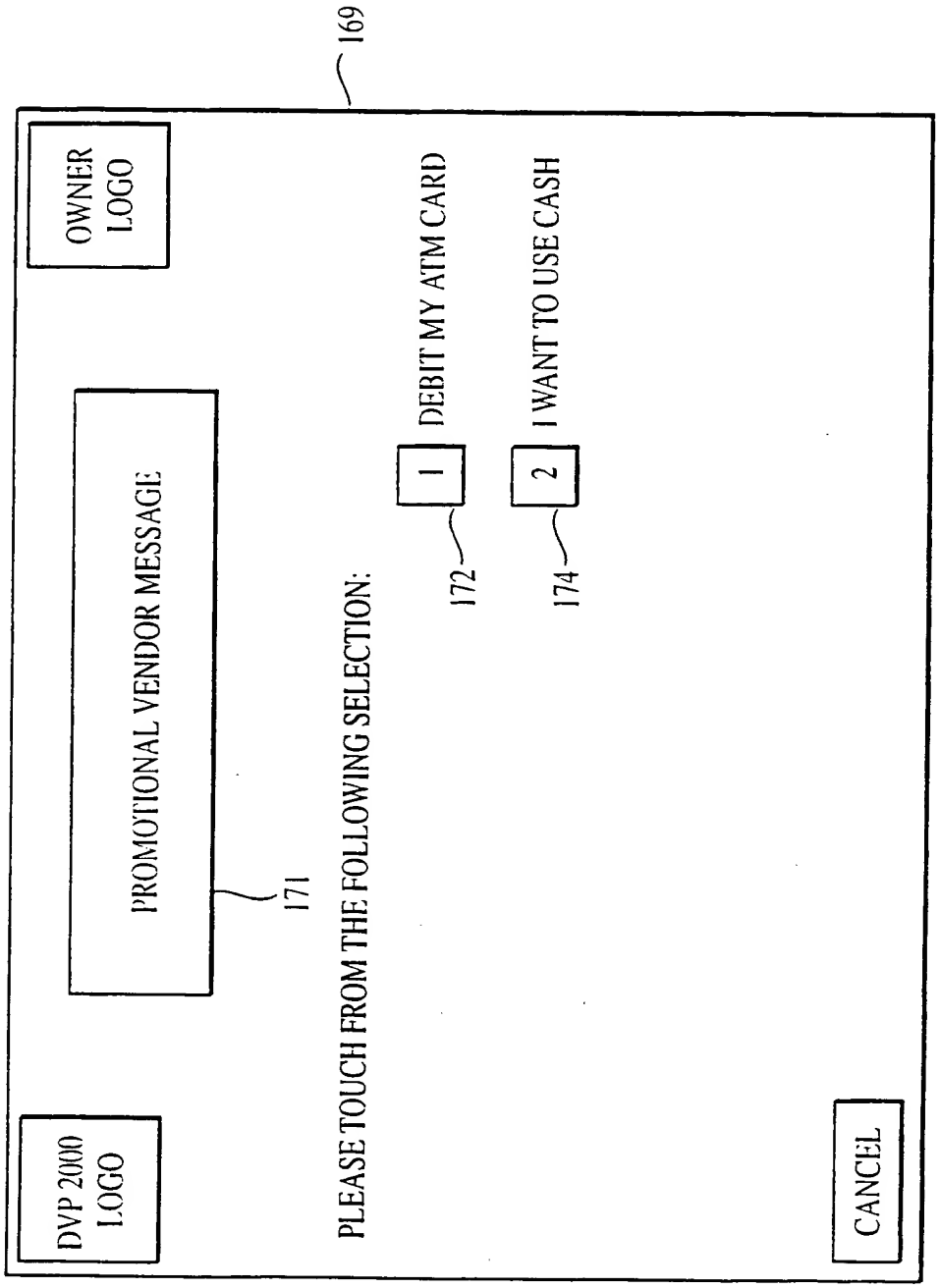
169
OWNER LOGO
PROMOTIONAL VENDOR MESSAGE
171
PLEASE TOUCH FROM THE FOLLOWING SELECTION:
1
DEBIT MY ATM CARD
172
2
I WANT TO USE CASH
174
DVP 2000 LOGO
CANCEL

FIG. 22

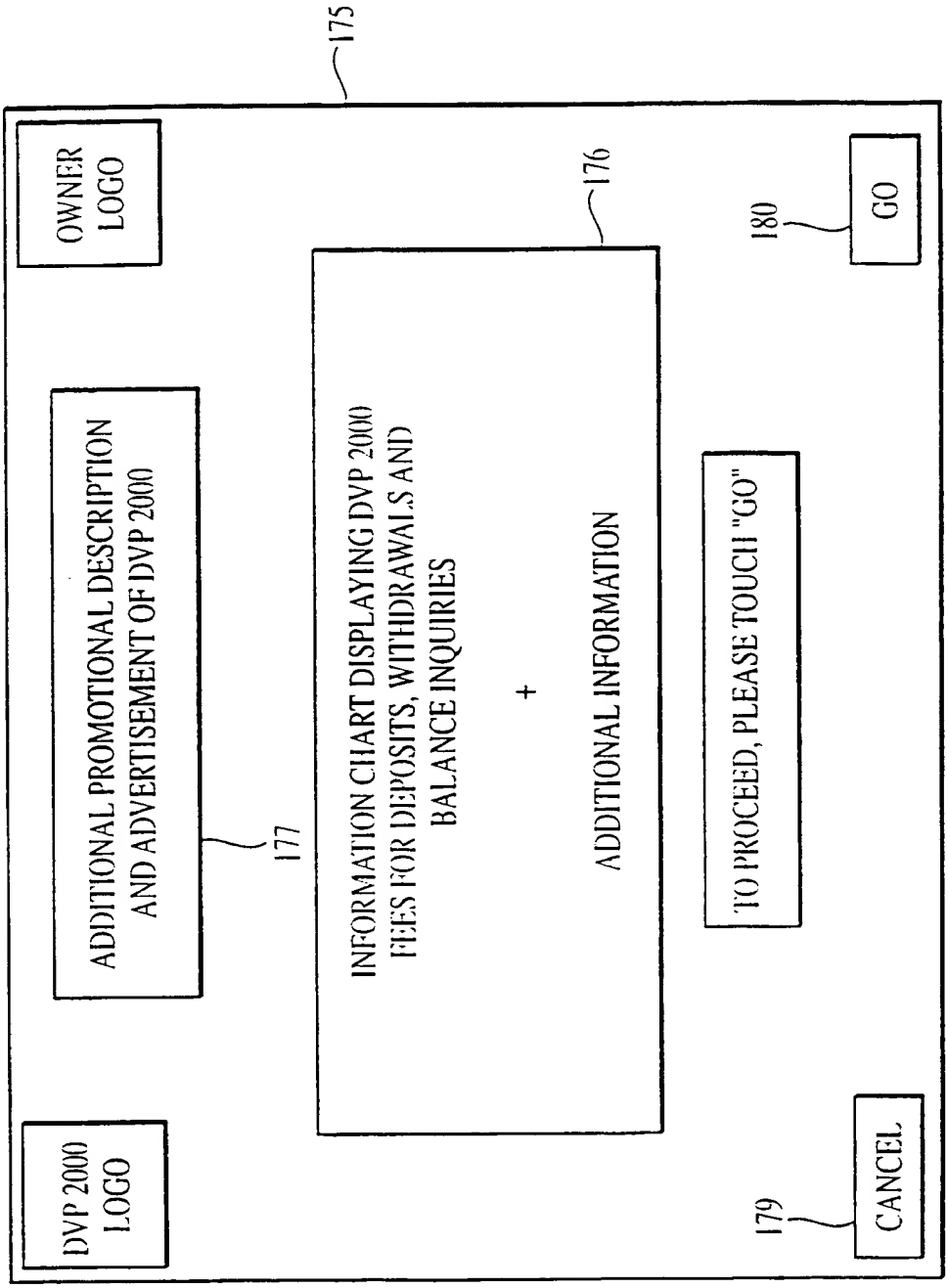
175
OWNER LOGO
ADDITIONAL PROMOTIONAL DESCRIPTION AND ADVERTISEMENT OF DVP 2000
177
176
INFORMATION CHART DISPLAYING DVP 2000 FEES FOR DEPOSITS, WITHDRAWALS AND BALANCE INQUIRIES
+
ADDITIONAL INFORMATION
180
GO
TO PROCEED, PLEASE TOUCH "GO"
DVP 2000 LOGO
179
CANCEL

FIG. 23

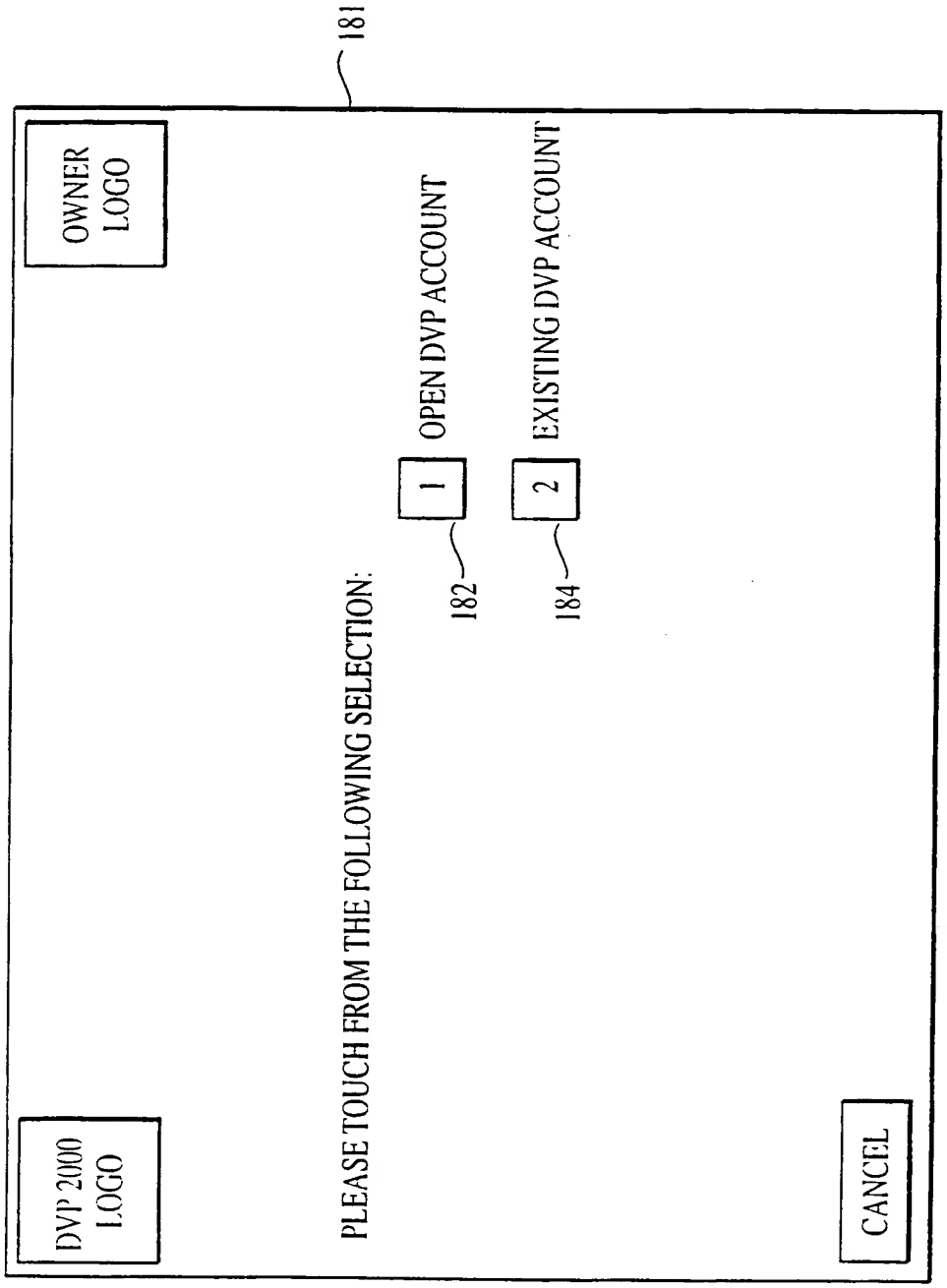
181
OWNER LOGO
1 OPEN DVP ACCOUNT
2 EXISTING DVP ACCOUNT
182
184
PLEASE TOUCH FROM THE FOLLOWING SELECTION:
DVP 2000 LOGO
CANCEL

FIG. 24

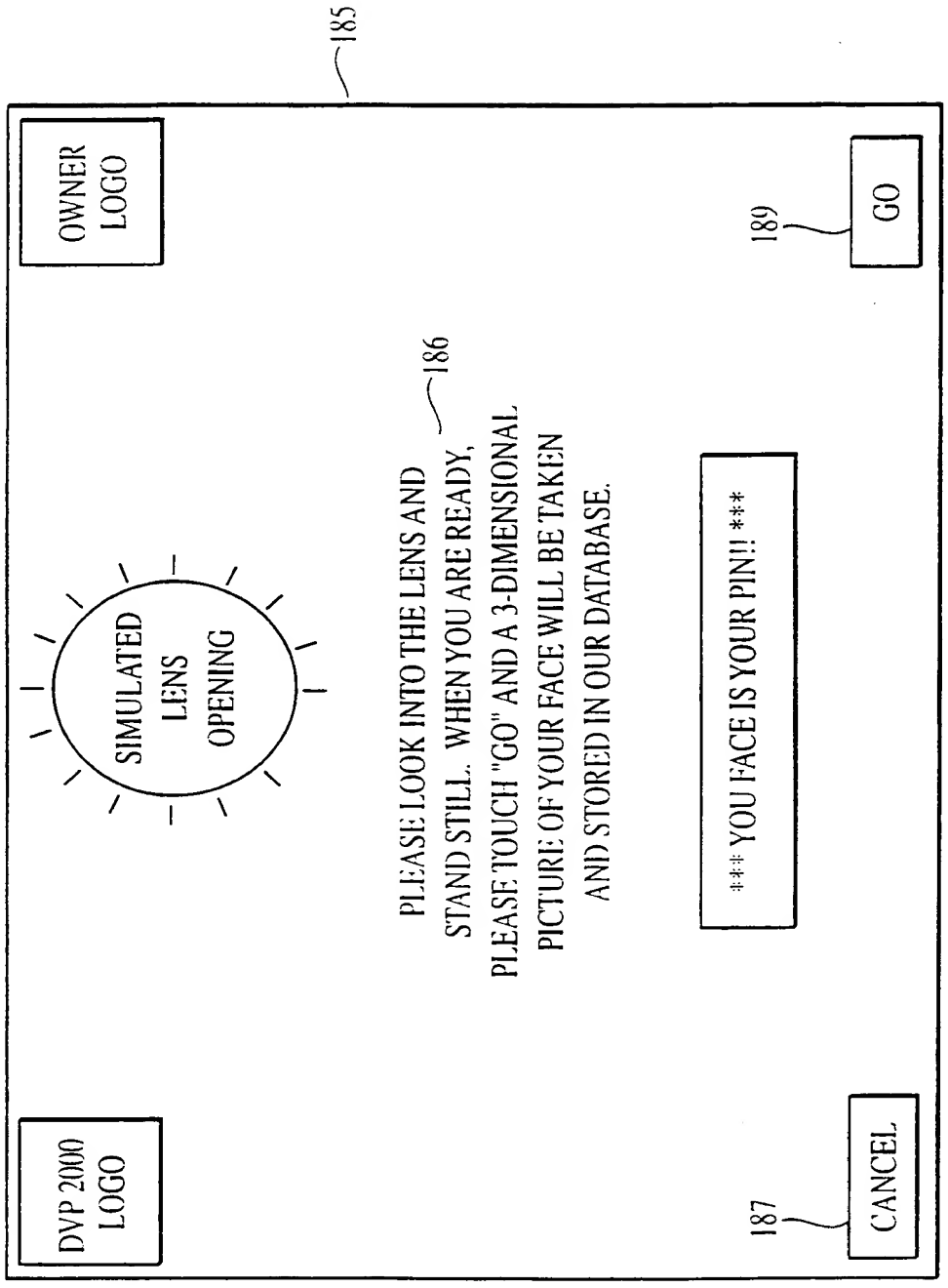
185
OWNER LOGO
SIMULATED LENS OPENING
186
PLEASE LOOK INTO THE LENS AND STAND STILL. WHEN YOU ARE READY, PLEASE TOUCH "GO" AND A 3-DIMENSIONAL PICTURE OF YOUR FACE WILL BE TAKEN AND STORED IN OUR DATABASE.
*** YOU FACE IS YOUR PIN!! ***
189
GO
DVP 2000 LOGO
187
CANCEL

FIG. 25

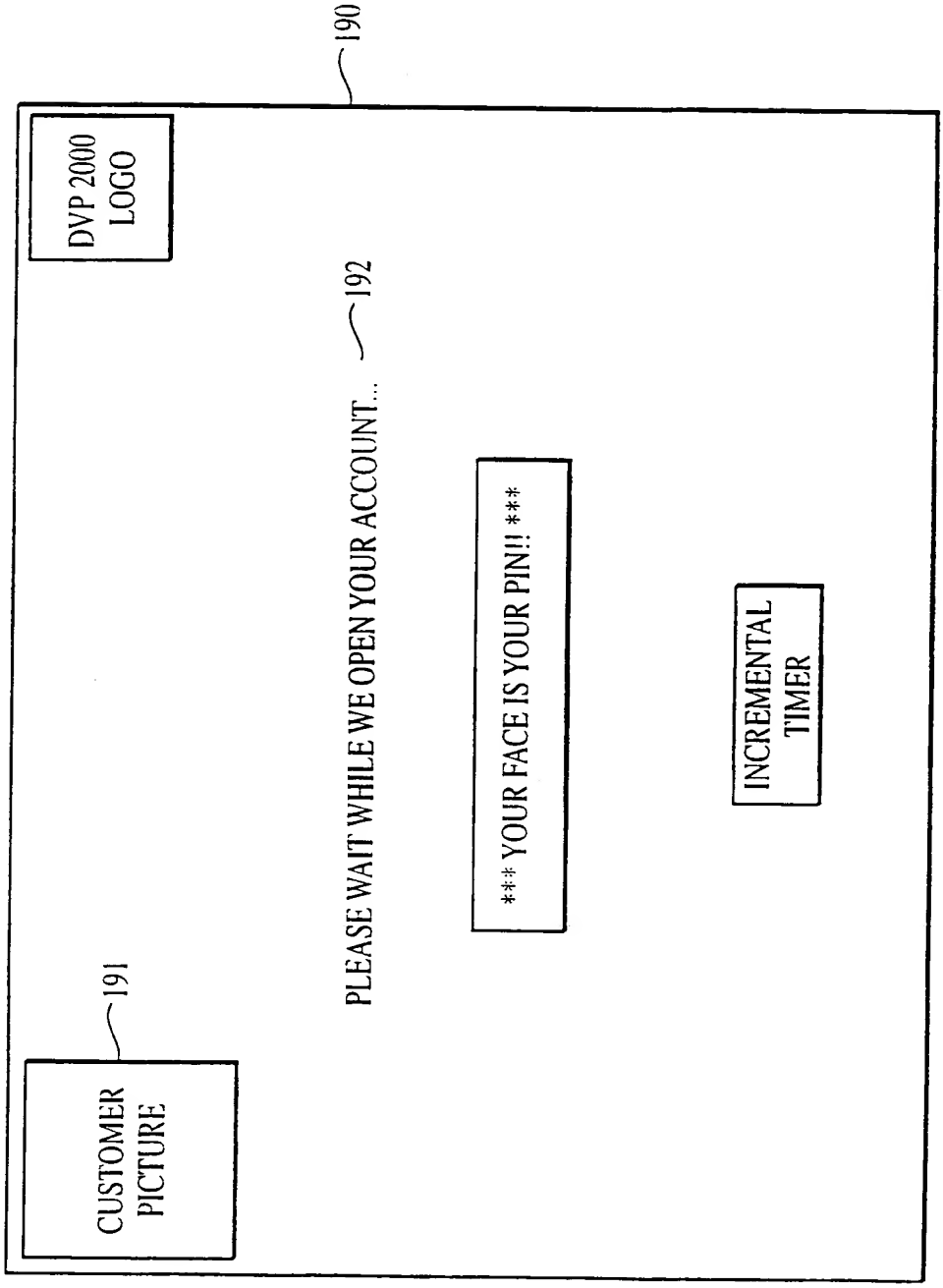
190
DVP 2000 LOGO
192
PLEASE WAIT WHILE WE OPEN YOUR ACCOUNT...
*** YOUR FACE IS YOUR PIN!! ***
INCREMENTAL TIMER
191
CUSTOMER PICTURE

FIG. 26

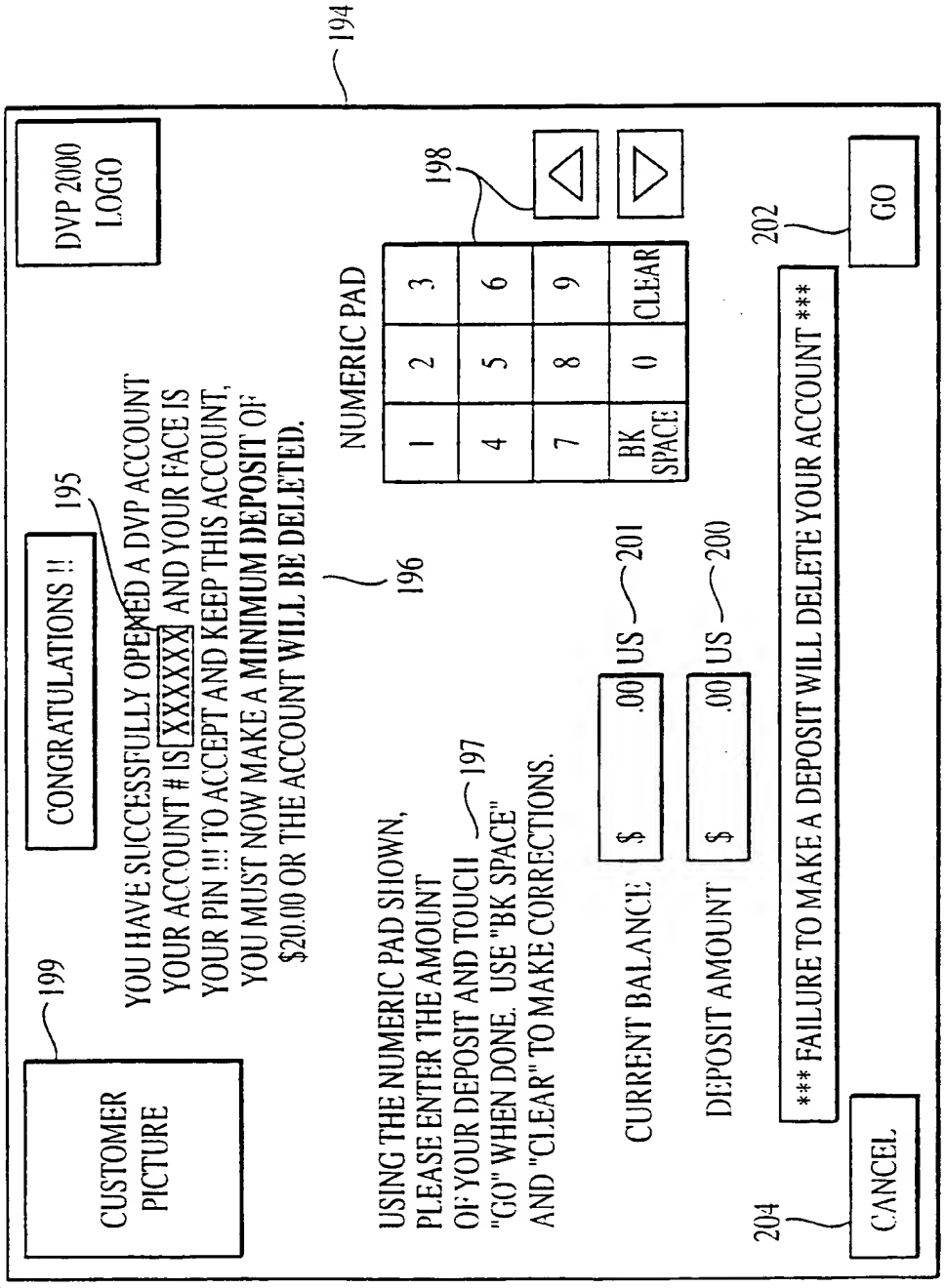
194
DVP 2000 LOGO
CONGRATULATIONS !!
195
199
CUSTOMER PICTURE
YOU HAVE SUCCESSFULLY OPENED A DVP ACCOUNT
YOUR ACCOUNT # IS XXXXXX AND YOUR FACE IS
YOUR PIN !!! TO ACCEPT AND KEEP THIS ACCOUNT,
YOU MUST NOW MAKE A MINIMUM DEPOSIT OF
$20.00 OR THE ACCOUNT WILL BE DELETED.
NUMERIC PAD
198
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
196
USING THE NUMERIC PAD SHOWN,
PLEASE ENTER THE AMOUNT
OF YOUR DEPOSIT AND TOUCH
"GO" WHEN DONE. USE "BK SPACE"
AND "CLEAR" TO MAKE CORRECTIONS.
197
CURRENT BALANCE $ .00 US
201
DEPOSIT AMOUNT $ .00 US
200
202
GO
*** FAILURE TO MAKE A DEPOSIT WILL DELETE YOUR ACCOUNT ***
204
CANCEL

FIG. 27

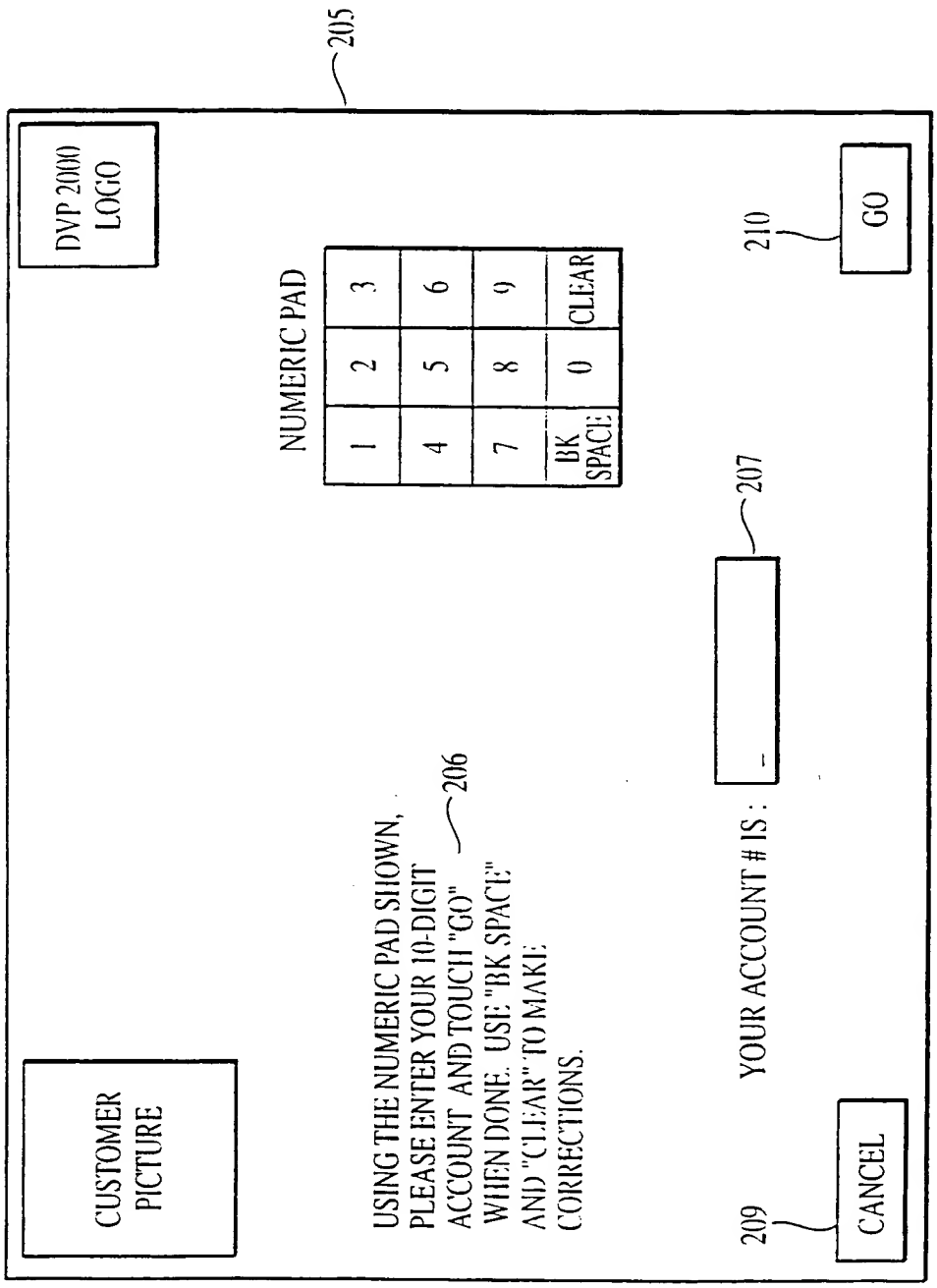
205
DVP 2000 LOGO
NUMERIC PAD
1
2
3
4
5
6
7
8
9
BK SPACE
0
CLEAR
210
GO
USING THE NUMERIC PAD SHOWN, PLEASE ENTER YOUR 10-DIGIT ACCOUNT AND TOUCH "GO" WHEN DONE. USE "BK SPACE" AND "CLEAR" TO MAKE CORRECTIONS.
206
207
YOUR ACCOUNT # IS :
CUSTOMER PICTURE
209
CANCEL

FIG. 28

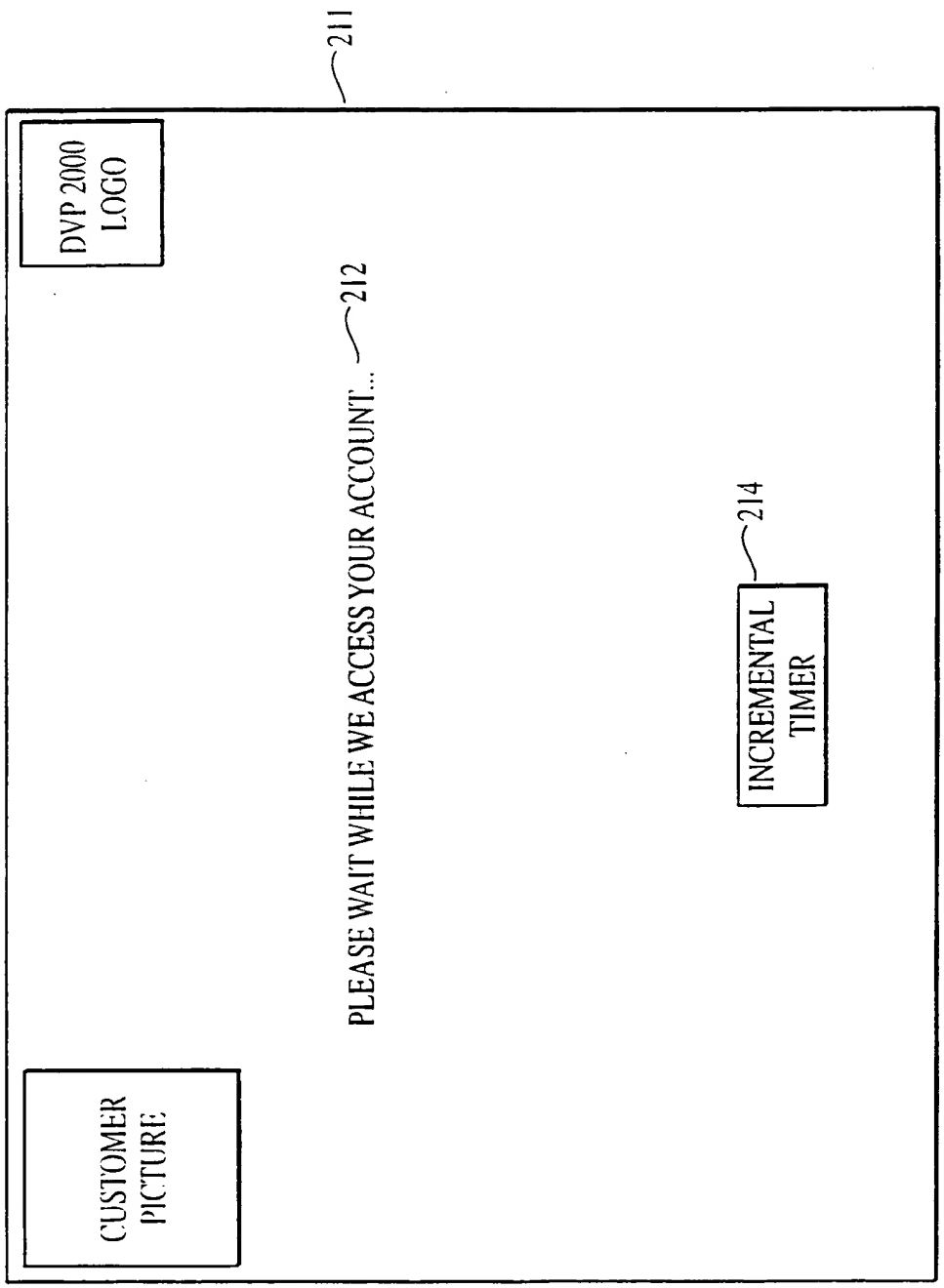
211
DVP 2000 LOGO
212
PLEASE WAIT WHILE WE ACCESS YOUR ACCOUNT...
214
INCREMENTAL TIMER
CUSTOMER PICTURE

FIG. 29

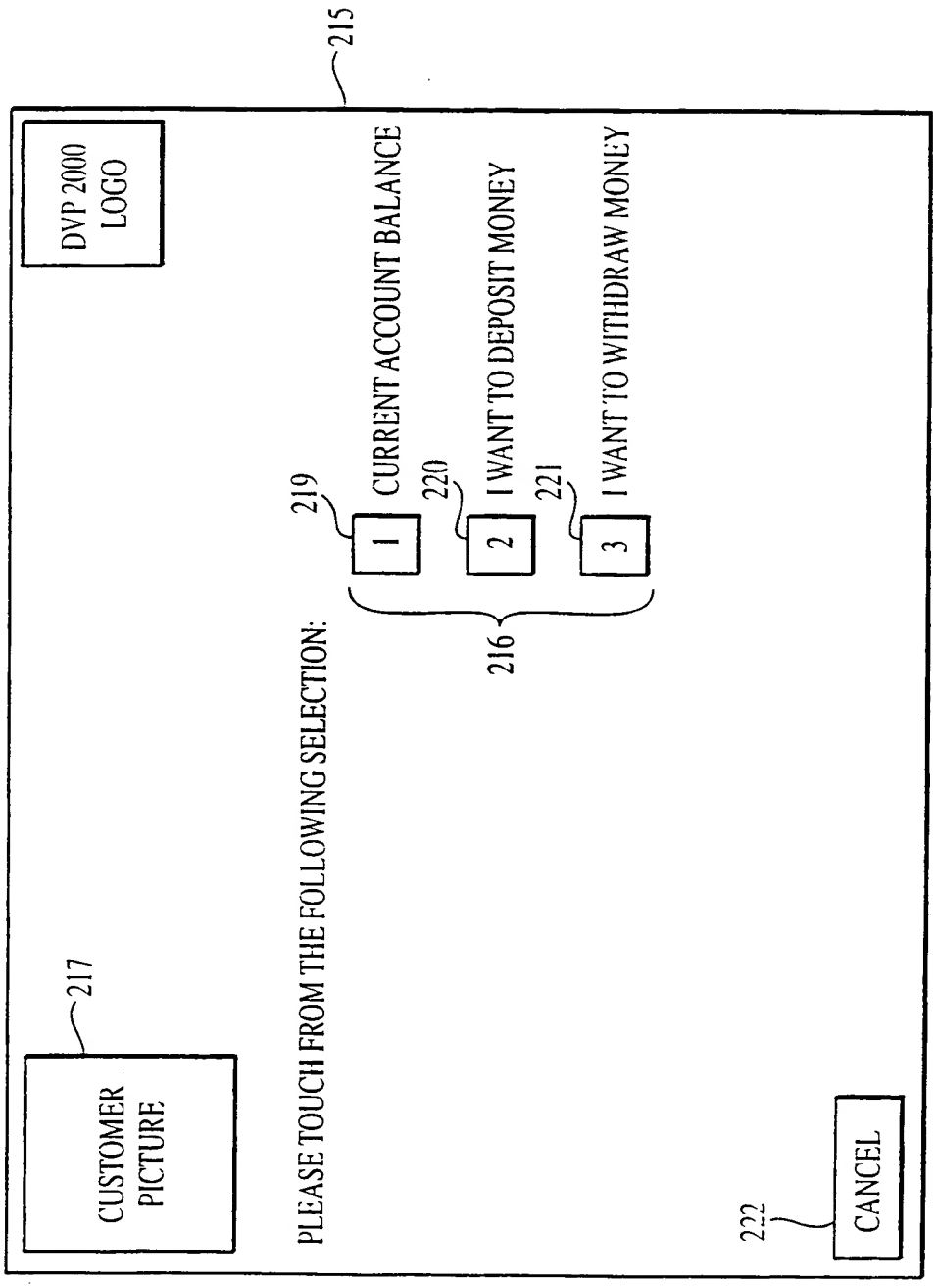
215
DVP 2000 LOGO
CUSTOMER PICTURE
217
PLEASE TOUCH FROM THE FOLLOWING SELECTION:
219
1 CURRENT ACCOUNT BALANCE
220
2 I WANT TO DEPOSIT MONEY
221
3 I WANT TO WITHDRAW MONEY
216
222
CANCEL

FIG. 30

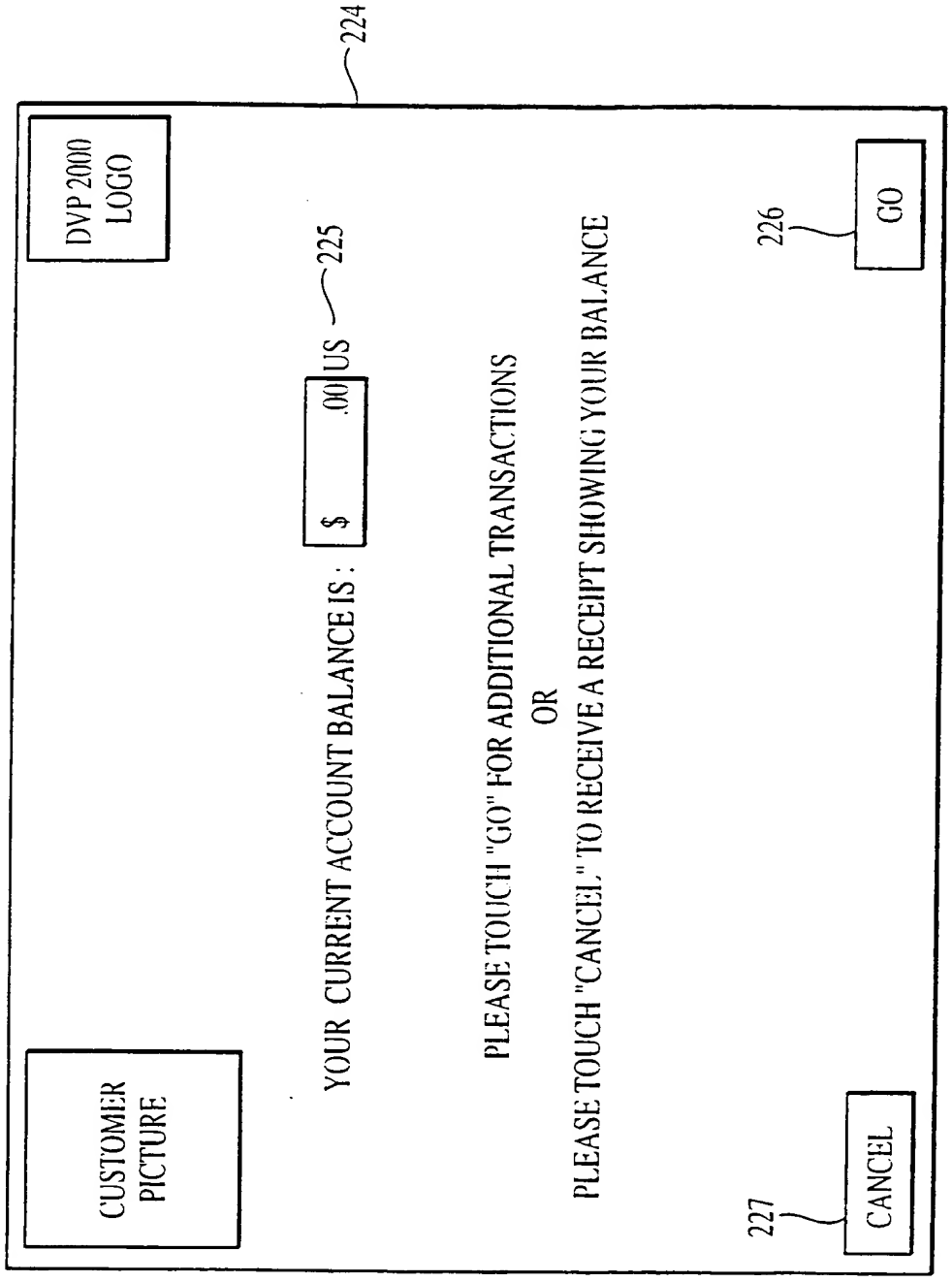
224
DVP 2000 LOGO
CUSTOMER PICTURE
YOUR CURRENT ACCOUNT BALANCE IS :
$ .00 US
225
PLEASE TOUCH "GO" FOR ADDITIONAL TRANSACTIONS
OR
PLEASE TOUCH "CANCEL" TO RECEIVE A RECEIPT SHOWING YOUR BALANCE
226
GO
227
CANCEL

FIG. 31

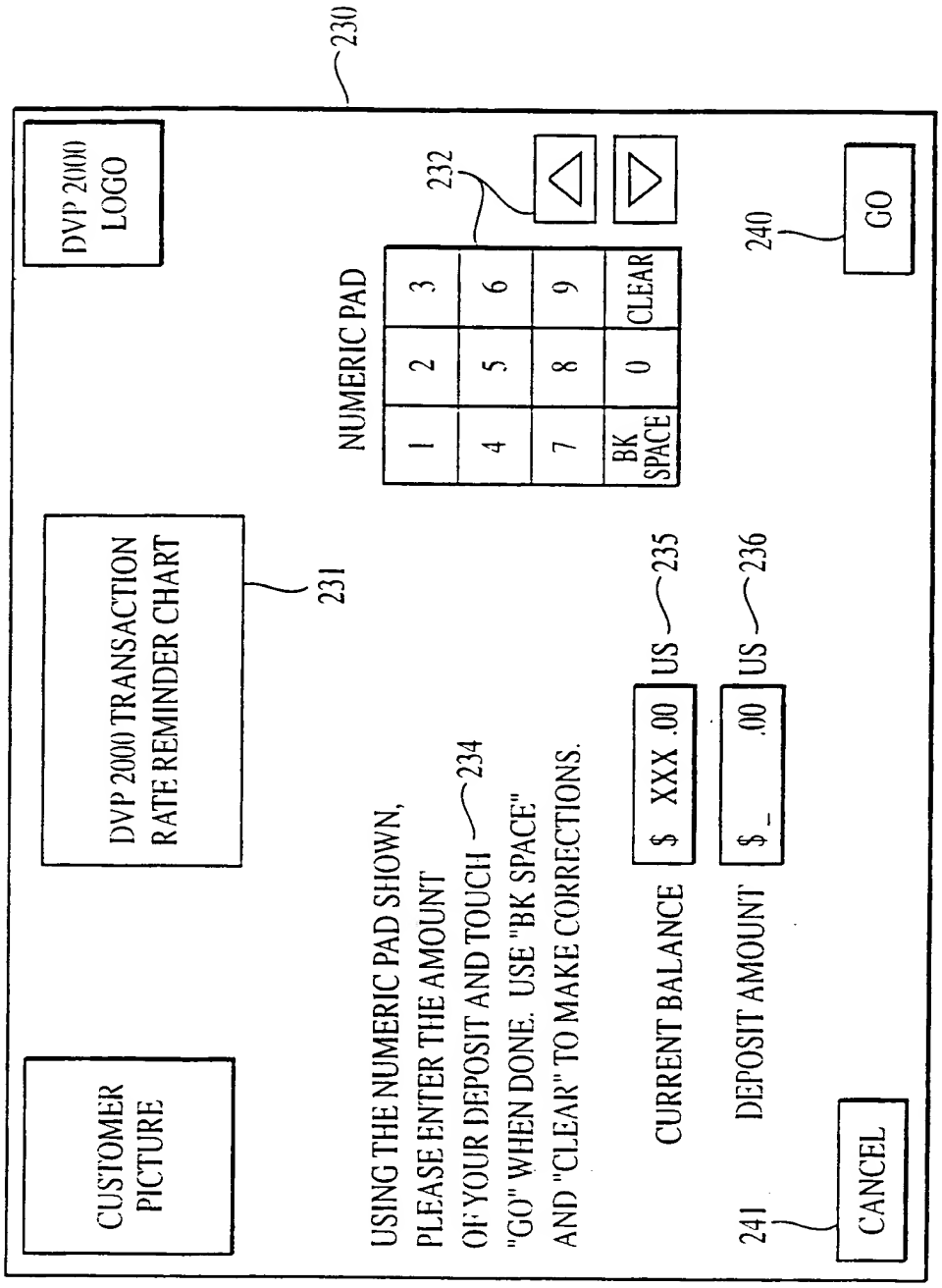
230
DVP 2000 LOGO
DVP 2000 TRANSACTION RATE REMINDER CHART
231
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
232
240
GO
CUSTOMER PICTURE
USING THE NUMERIC PAD SHOWN,
PLEASE ENTER THE AMOUNT
OF YOUR DEPOSIT AND TOUCH 234
"GO" WHEN DONE. USE "BK SPACE"
AND "CLEAR" TO MAKE CORRECTIONS.
CURRENT BALANCE $ XXX .00 US 235
DEPOSIT AMOUNT $_ .00 US 236
241
CANCEL

FIG. 32

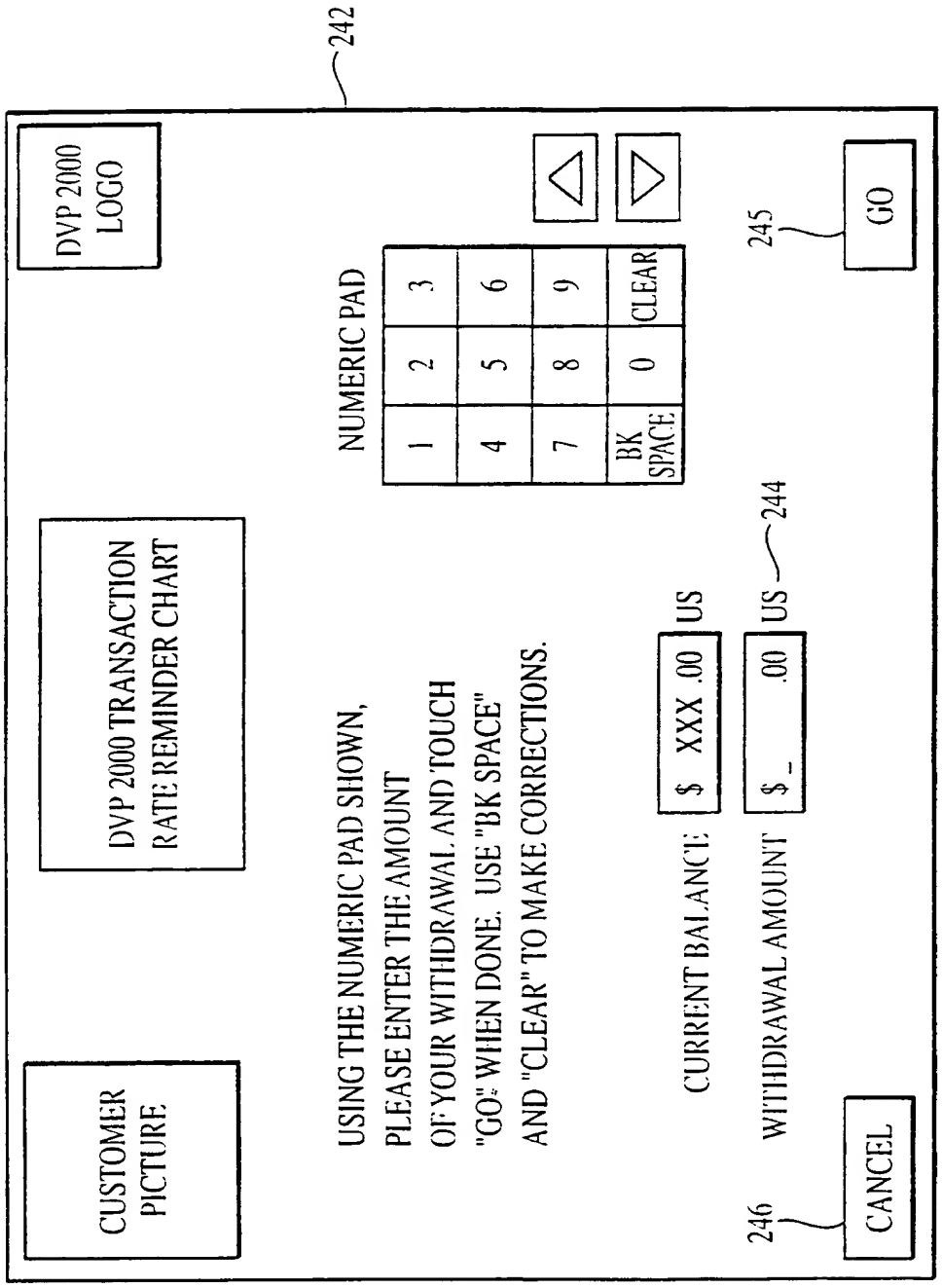
242
DVP 2000 LOGO
DVP 2000 TRANSACTION RATE REMINDER CHART
CUSTOMER PICTURE
USING THE NUMERIC PAD SHOWN, PLEASE ENTER THE AMOUNT OF YOUR WITHDRAWAL AND TOUCH "GO". WHEN DONE. USE "BK SPACE" AND "CLEAR" TO MAKE CORRECTIONS.
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
245
GO
CURRENT BALANCE $ XXX .00 US
WITHDRAWAL AMOUNT $_ .00 US
244
246
CANCEL

FIG. 33

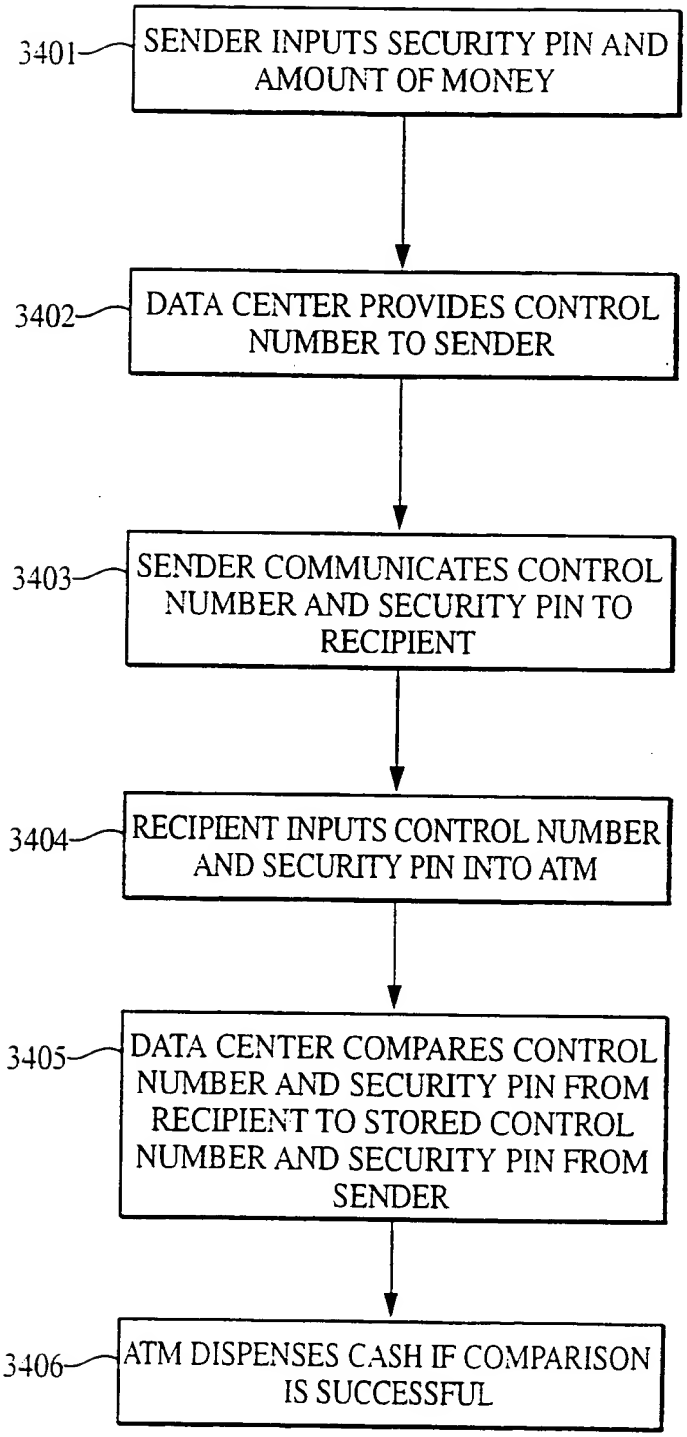
3401
SENDER INPUTS SECURITY PIN AND AMOUNT OF MONEY
3402
DATA CENTER PROVIDES CONTROL NUMBER TO SENDER
3403
SENDER COMMUNICATES CONTROL NUMBER AND SECURITY PIN TO RECIPIENT
3404
RECIPIENT INPUTS CONTROL NUMBER AND SECURITY PIN INTO ATM
3405
DATA CENTER COMPARES CONTROL NUMBER AND SECURITY PIN FROM RECIPIENT TO STORED CONTROL NUMBER AND SECURITY PIN FROM SENDER
3406
ATM DISPENSES CASH IF COMPARISON IS SUCCESSFUL

FIG. 34

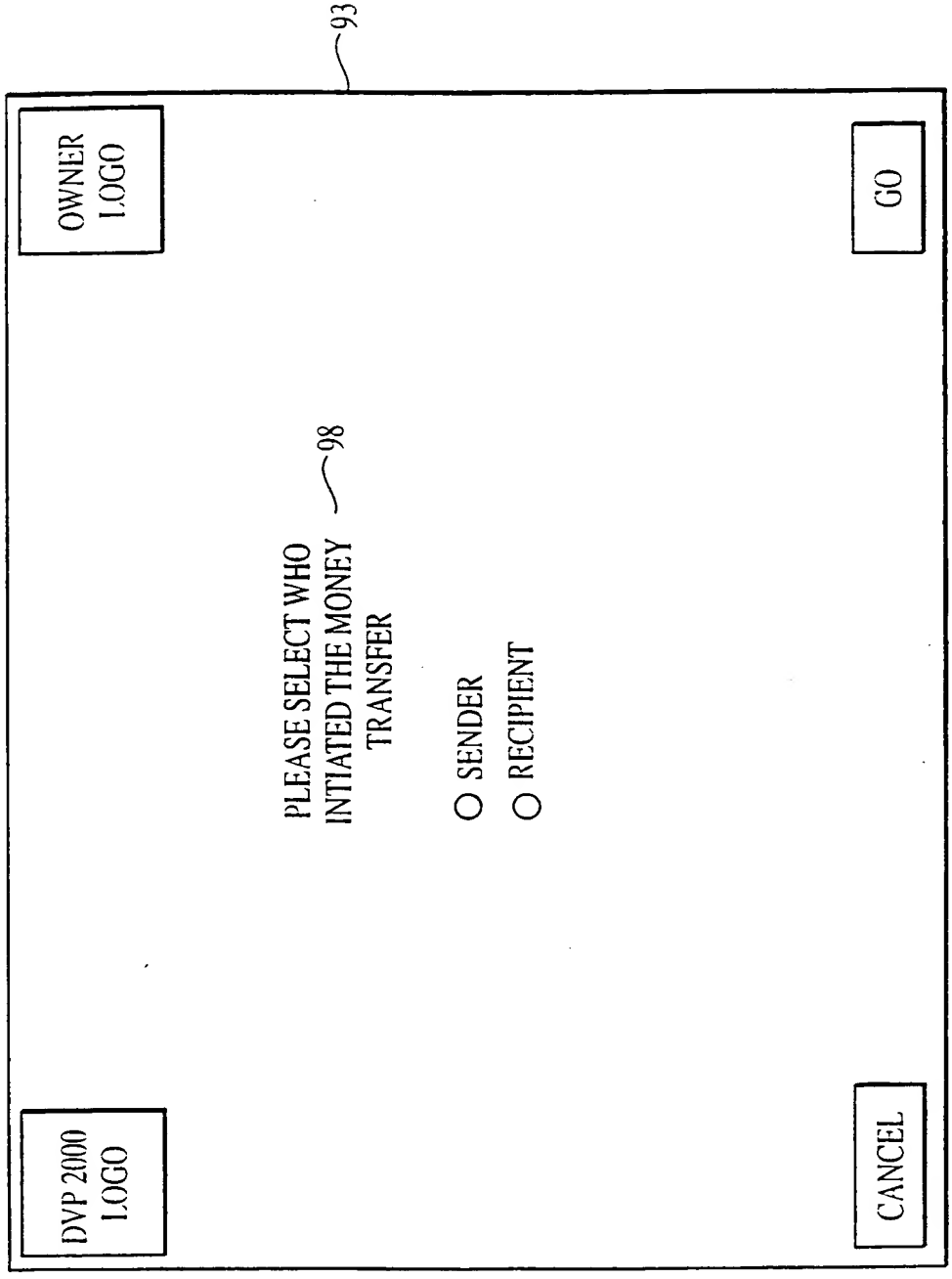
93
OWNER LOGO
GO
PLEASE SELECT WHO INTIATED THE MONEY TRANSFER
98
O SENDER
O RECIPIENT
DVP 2000 LOGO
CANCEL

FIG. 35

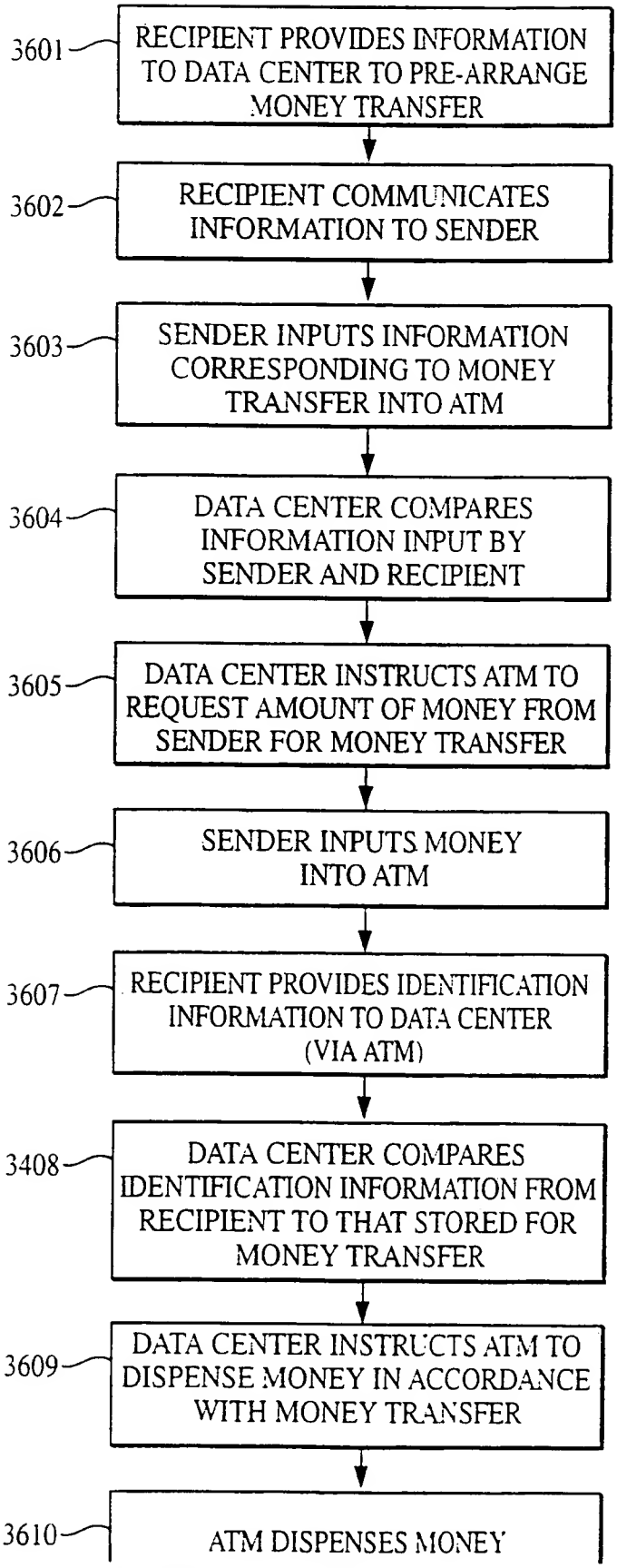
3601
RECIPIENT PROVIDES INFORMATION TO DATA CENTER TO PRE-ARRANGE MONEY TRANSFER
3602
RECIPIENT COMMUNICATES INFORMATION TO SENDER
3603
SENDER INPUTS INFORMATION CORRESPONDING TO MONEY TRANSFER INTO ATM
3604
DATA CENTER COMPARES INFORMATION INPUT BY SENDER AND RECIPIENT
3605
DATA CENTER INSTRUCTS ATM TO REQUEST AMOUNT OF MONEY FROM SENDER FOR MONEY TRANSFER
3606
SENDER INPUTS MONEY INTO ATM
3607
RECIPIENT PROVIDES IDENTIFICATION INFORMATION TO DATA CENTER (VIA ATM)
3408
DATA CENTER COMPARES IDENTIFICATION INFORMATION FROM RECIPIENT TO THAT STORED FOR MONEY TRANSFER
3609
DATA CENTER INSTRUCTS ATM TO DISPENSE MONEY IN ACCORDANCE WITH MONEY TRANSFER
3610
ATM DISPENSES MONEY

FIG. 36

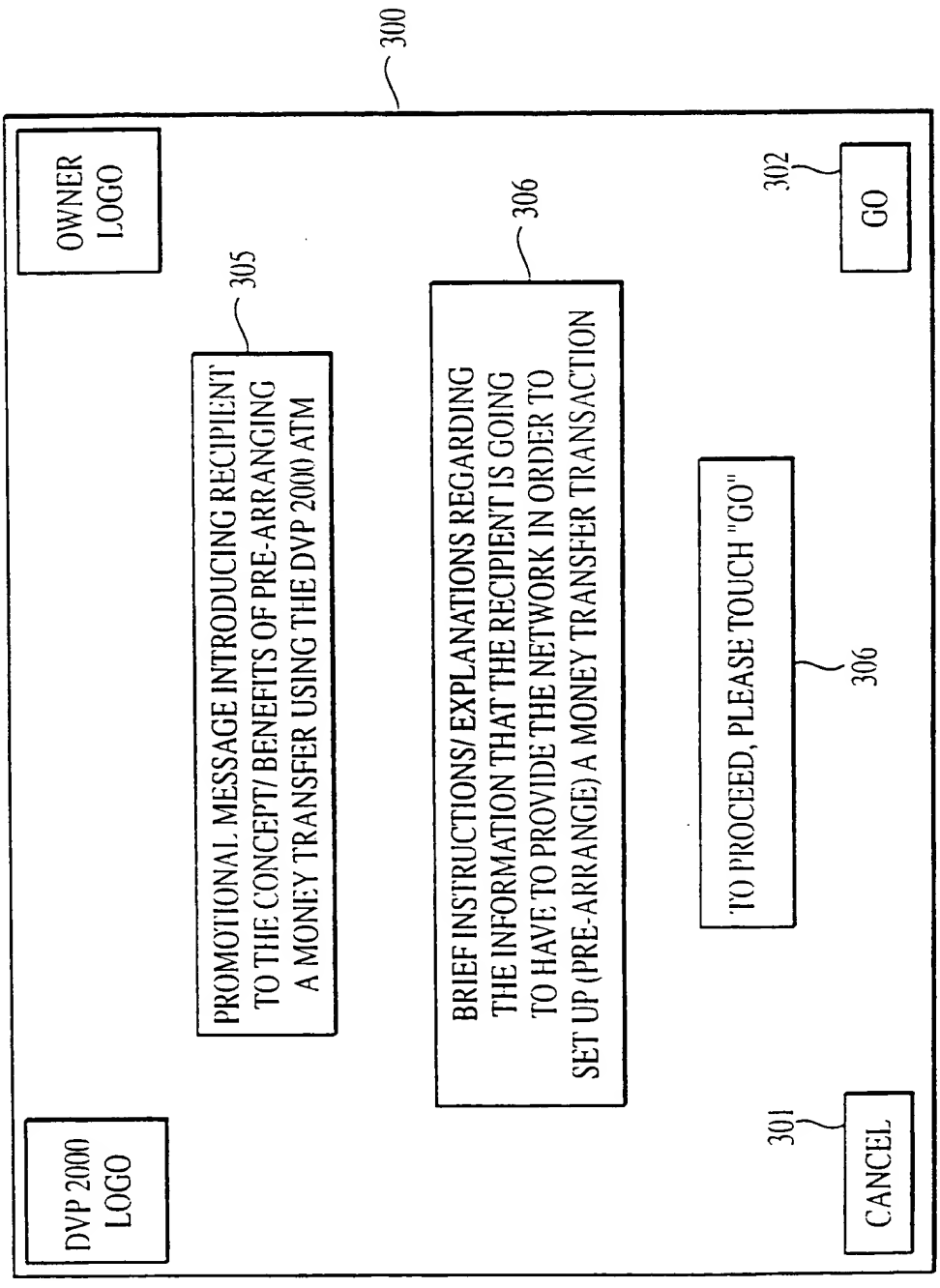
300
OWNER LOGO
305
PROMOTIONAL MESSAGE INTRODUCING RECIPIENT TO THE CONCEPT/ BENEFITS OF PRE-ARRANGING A MONEY TRANSFER USING THE DVP 2000 ATM
306
BRIEF INSTRUCTIONS/ EXPLANATIONS REGARDING THE INFORMATION THAT THE RECIPIENT IS GOING TO HAVE TO PROVIDE THE NETWORK IN ORDER TO SET UP (PRE-ARRANGE) A MONEY TRANSFER TRANSACTION
302
GO
TO PROCEED, PLEASE TOUCH "GO"
306
DVP 2000 LOGO
301
CANCEL

FIG. 37

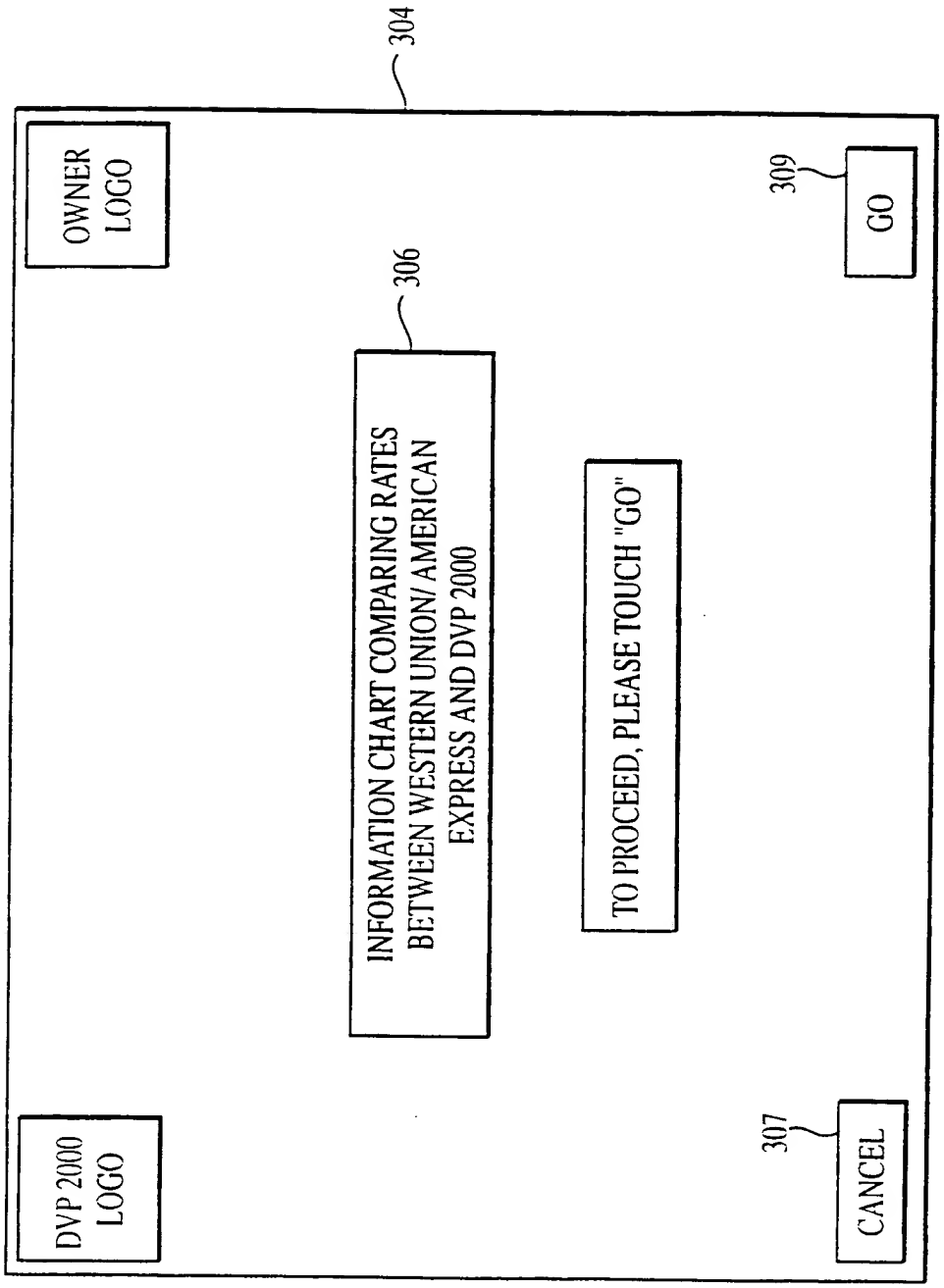
304
OWNER LOGO
309
GO
306
INFORMATION CHART COMPARING RATES BETWEEN WESTERN UNION/ AMERICAN EXPRESS AND DVP 2000
TO PROCEED, PLEASE TOUCH "GO"
DVP 2000 LOGO
307
CANCEL

FIG. 38

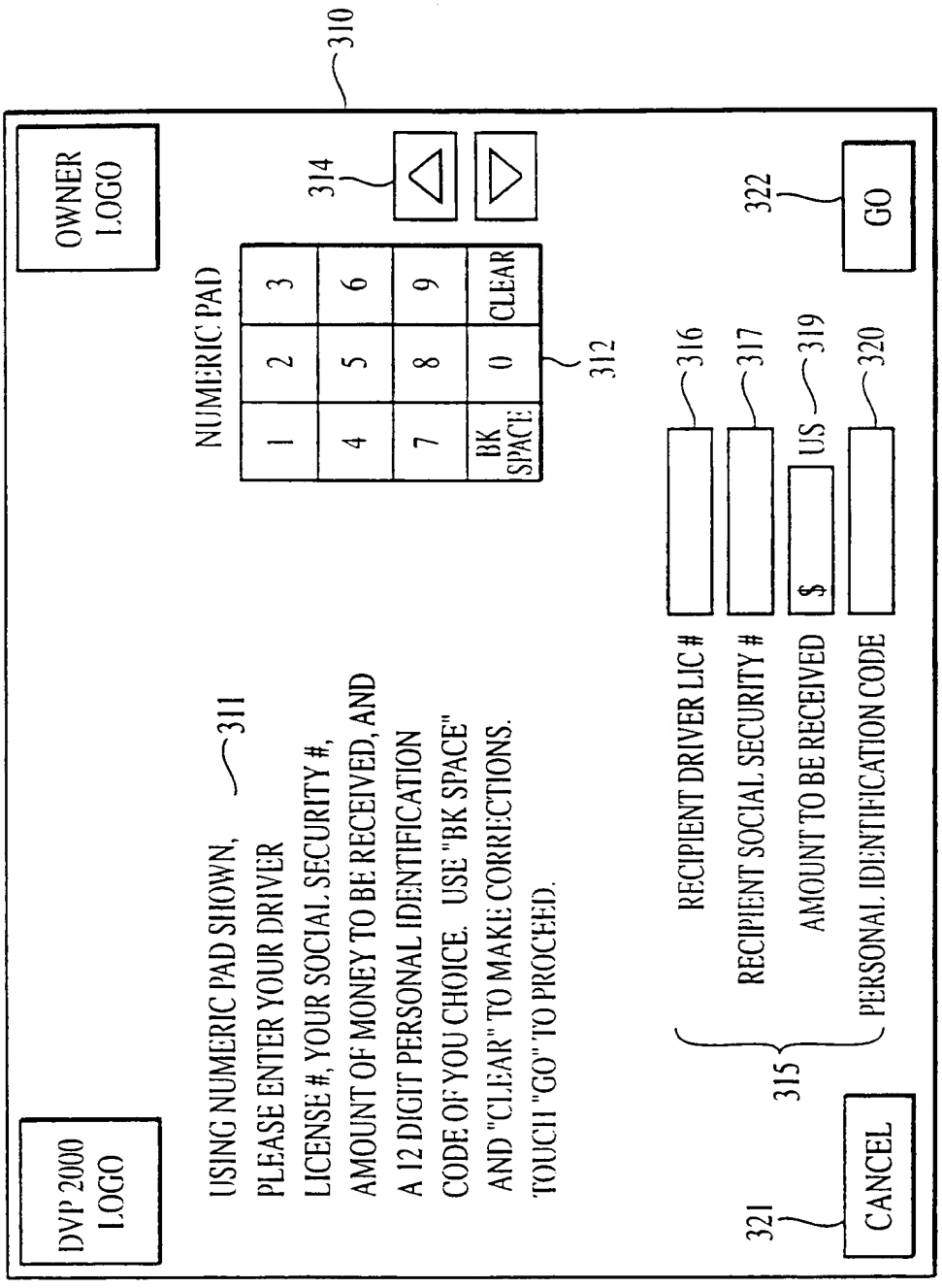
310
OWNER LOGO
DVP 2000 LOGO
USING NUMERIC PAD SHOWN,
PLEASE ENTER YOUR DRIVER
LICENSE #, YOUR SOCIAL SECURITY #,
AMOUNT OF MONEY TO BE RECEIVED, AND
A 12 DIGIT PERSONAL IDENTIFICATION
CODE OF YOU CHOICE. USE "BK SPACE"
AND "CLEAR" TO MAKE CORRECTIONS.
TOUCH "GO" TO PROCEED.
311
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
312
314
RECIPIENT DRIVER LIC #
RECIPIENT SOCIAL SECURITY #
AMOUNT TO BE RECEIVED
PERSONAL IDENTIFICATION CODE
315
316
317
$
US
319
320
322
GO
321
CANCEL

FIG. 39

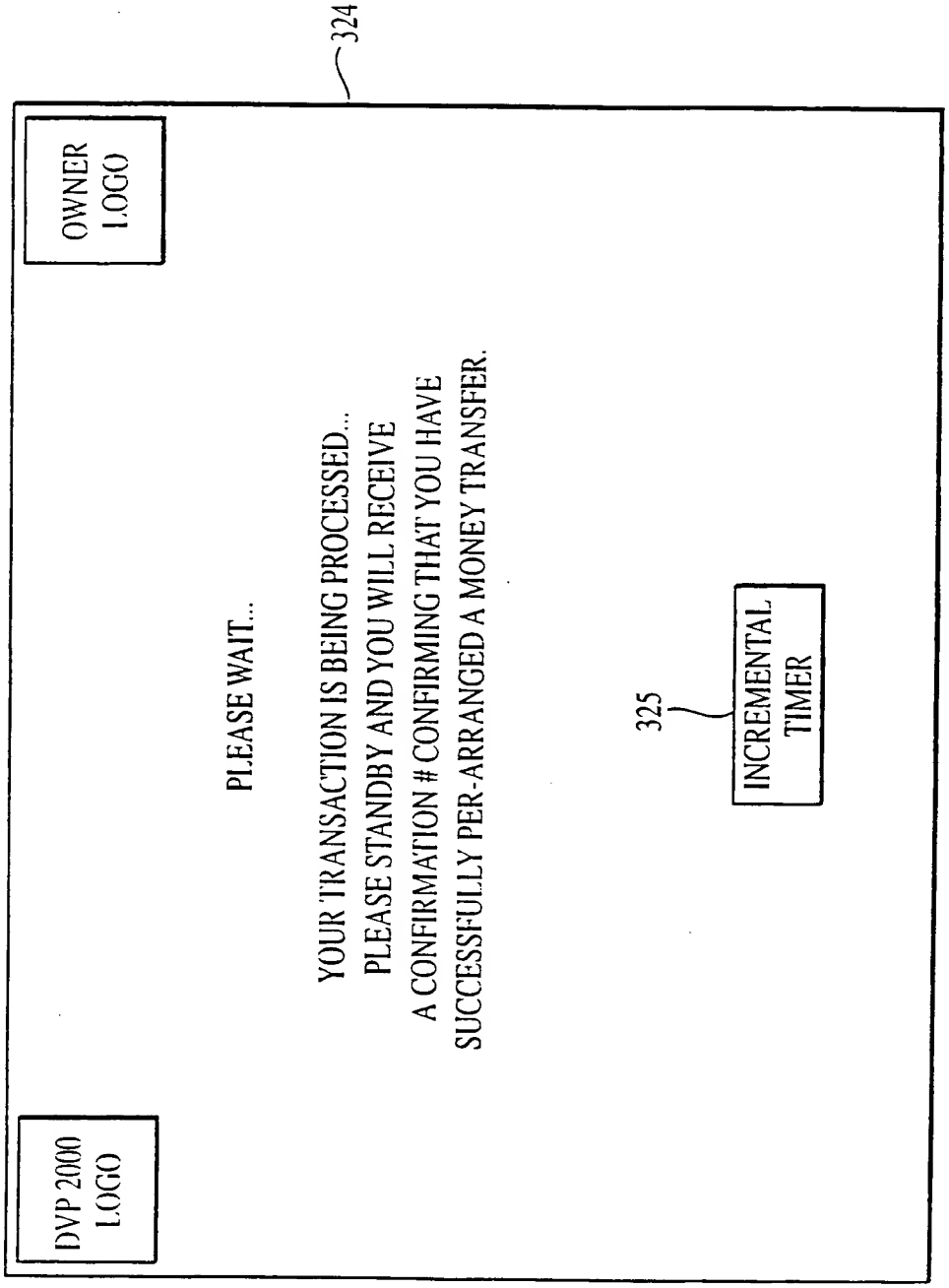
324
OWNER LOGO
PLEASE WAIT...
YOUR TRANSACTION IS BEING PROCESSED...
PLEASE STANDBY AND YOU WILL RECEIVE
A CONFIRMATION # CONFIRMING THAT YOU HAVE
SUCCESSFULLY PER-ARRANGED A MONEY TRANSFER.
325
INCREMENTAL TIMER
DVP 2000 LOGO

FIG. 40

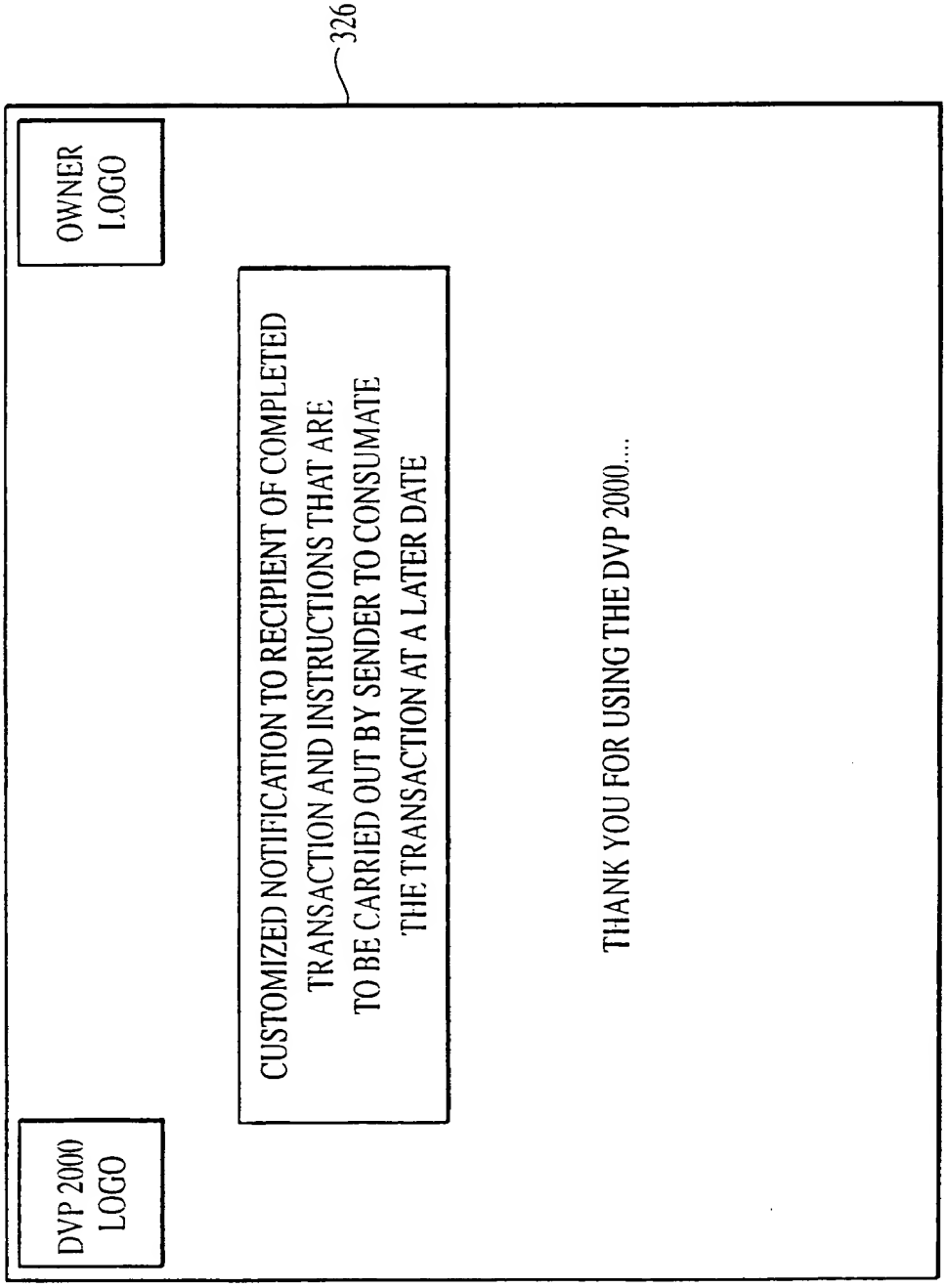
326
OWNER LOGO
CUSTOMIZED NOTIFICATION TO RECIPIENT OF COMPLETED TRANSACTION AND INSTRUCTIONS THAT ARE TO BE CARRIED OUT BY SENDER TO CONSUMATE THE TRANSACTION AT A LATER DATE
THANK YOU FOR USING THE DVP 2000....
DVP 2000 LOGO

FIG. 41

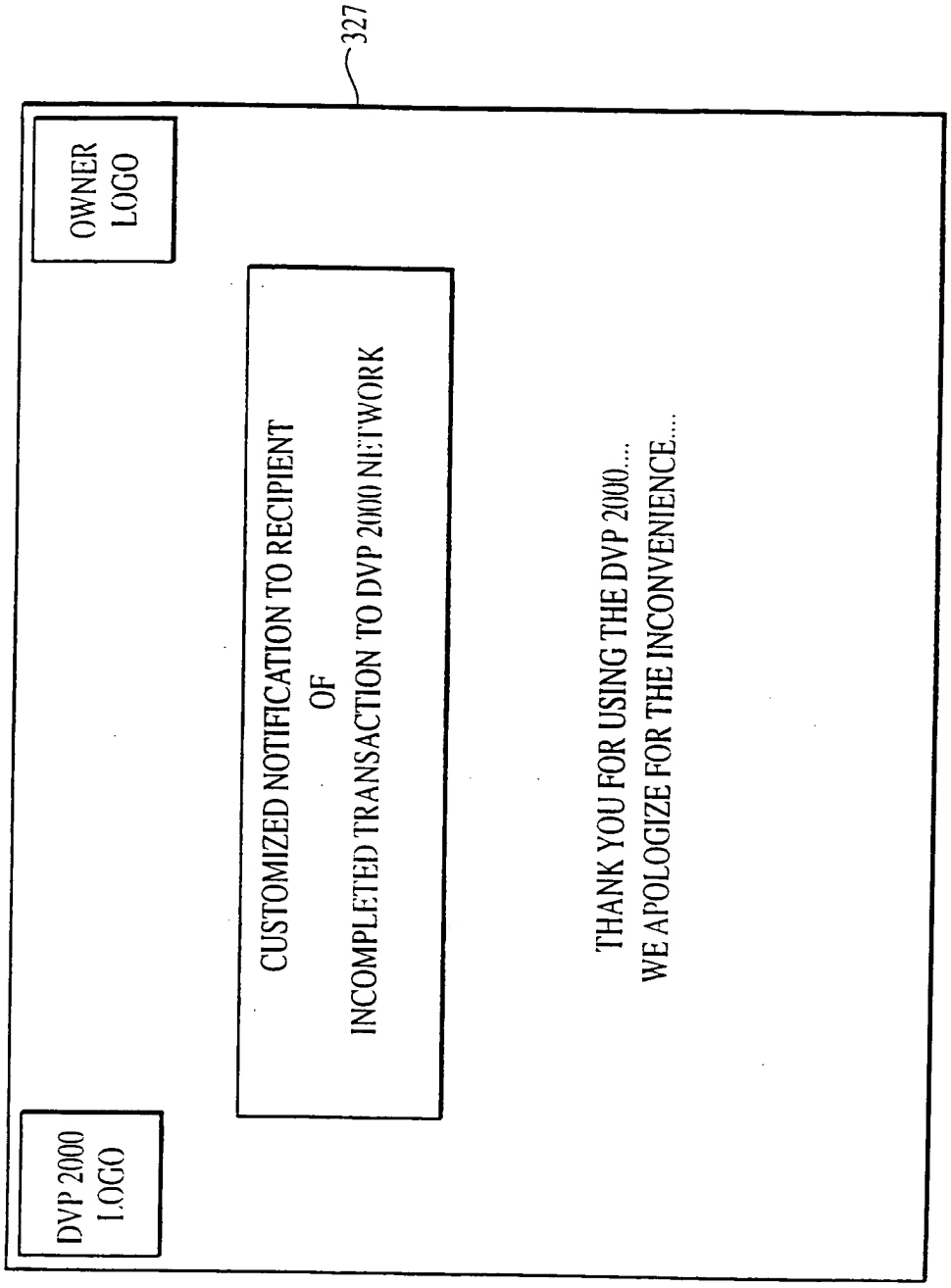
327
OWNER LOGO
CUSTOMIZED NOTIFICATION TO RECIPIENT OF INCOMPLETED TRANSACTION TO DVP 2000 NETWORK
THANK YOU FOR USING THE DVP 2000....
WE APOLOGIZE FOR THE INCONVENIENCE....
DVP 2000 LOGO

FIG. 42

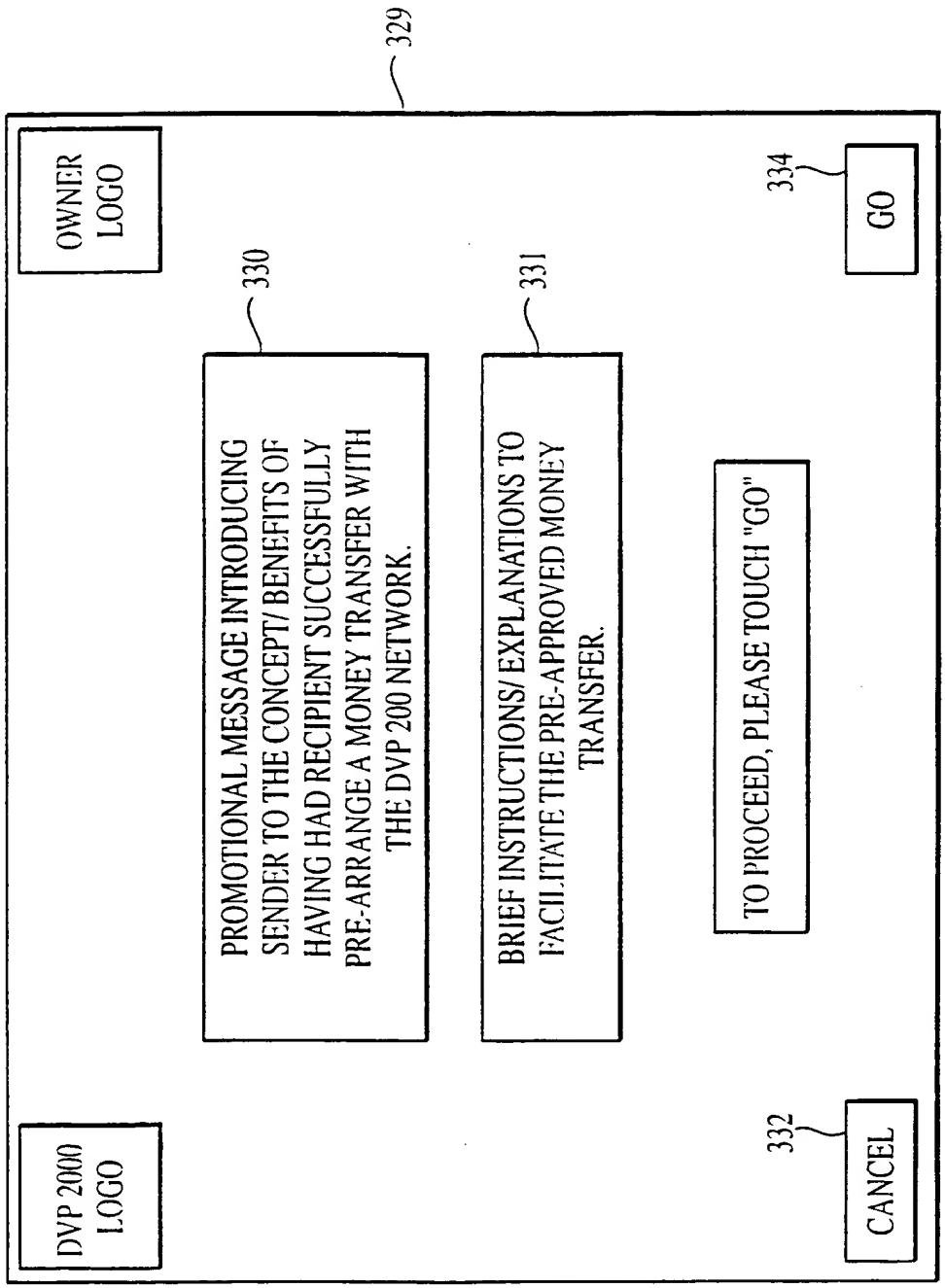
329
OWNER LOGO
330
PROMOTIONAL MESSAGE INTRODUCING SENDER TO THE CONCEPT/ BENEFITS OF HAVING HAD RECIPIENT SUCCESSFULLY PRE-ARRANGE A MONEY TRANSFER WITH THE DVP 200 NETWORK.
331
BRIEF INSTRUCTIONS/ EXPLANATIONS TO FACILITATE THE PRE-APPROVED MONEY TRANSFER.
TO PROCEED, PLEASE TOUCH "GO"
334
GO
DVP 2000 LOGO
332
CANCEL

FIG. 43

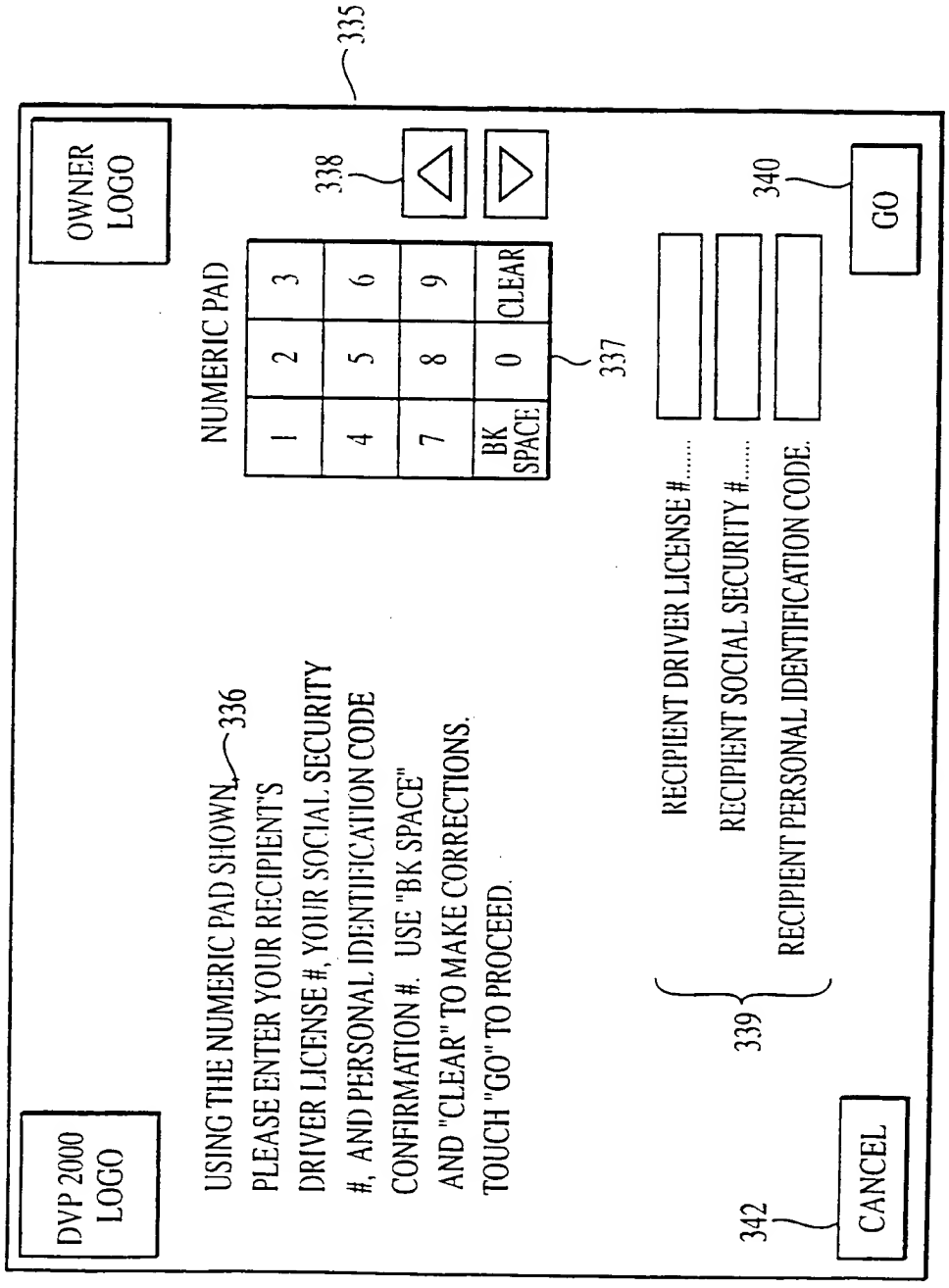
335
OWNER LOGO
DVP 2000 LOGO
USING THE NUMERIC PAD SHOWN 336
PLEASE ENTER YOUR RECIPIENT'S
DRIVER LICENSE #, YOUR SOCIAL SECURITY
#, AND PERSONAL IDENTIFICATION CODE
CONFIRMATION #. USE "BK SPACE"
AND "CLEAR" TO MAKE CORRECTIONS.
TOUCH "GO" TO PROCEED.
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
337
338
RECIPIENT DRIVER LICENSE #.....
RECIPIENT SOCIAL SECURITY #.....
RECIPIENT PERSONAL IDENTIFICATION CODE.
339
340
GO
342
CANCEL

FIG. 44

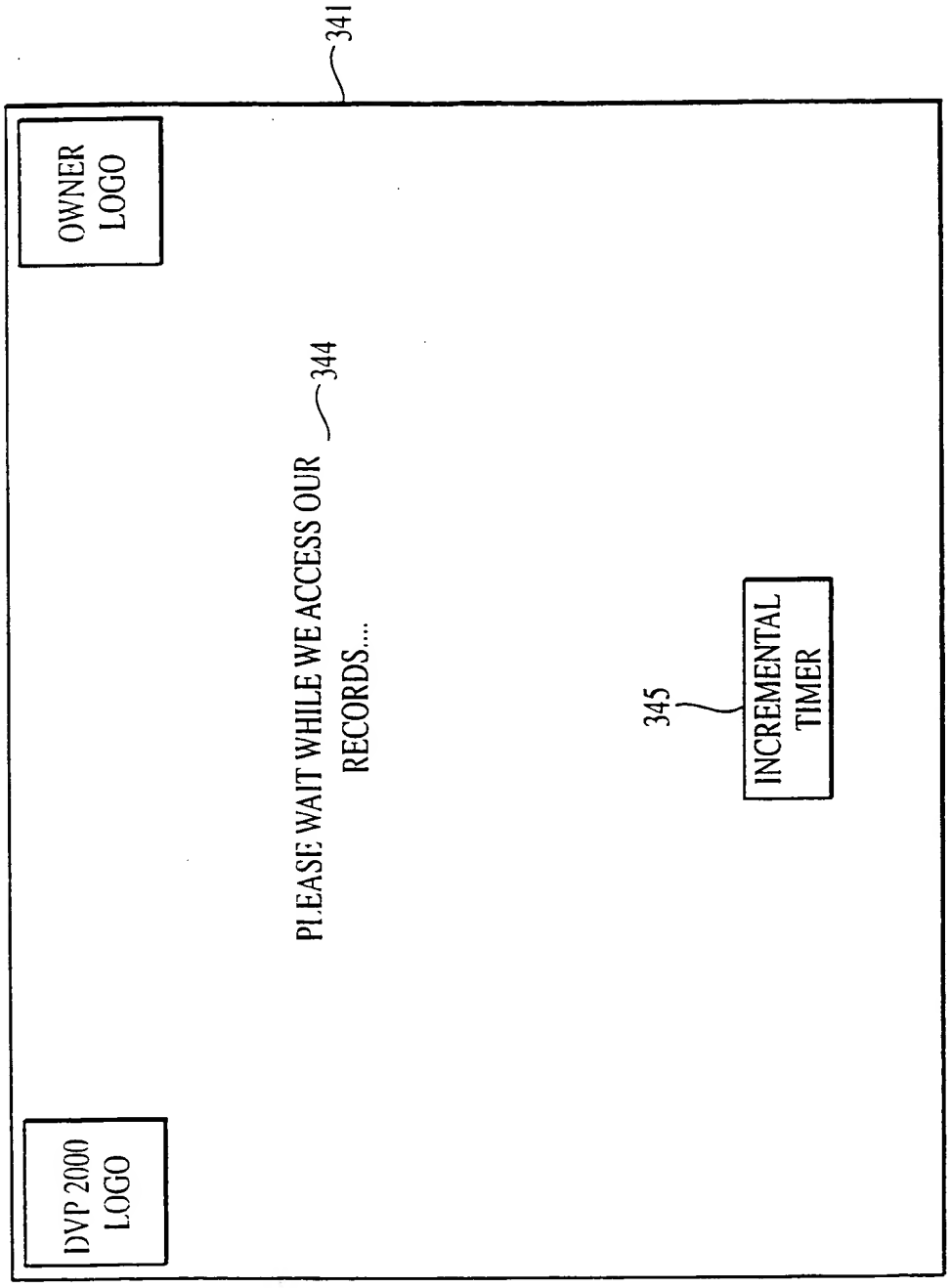
341
OWNER LOGO
344
PLEASE WAIT WHILE WE ACCESS OUR RECORDS....
345
INCREMENTAL TIMER
DVP 2000 LOGO

FIG. 45

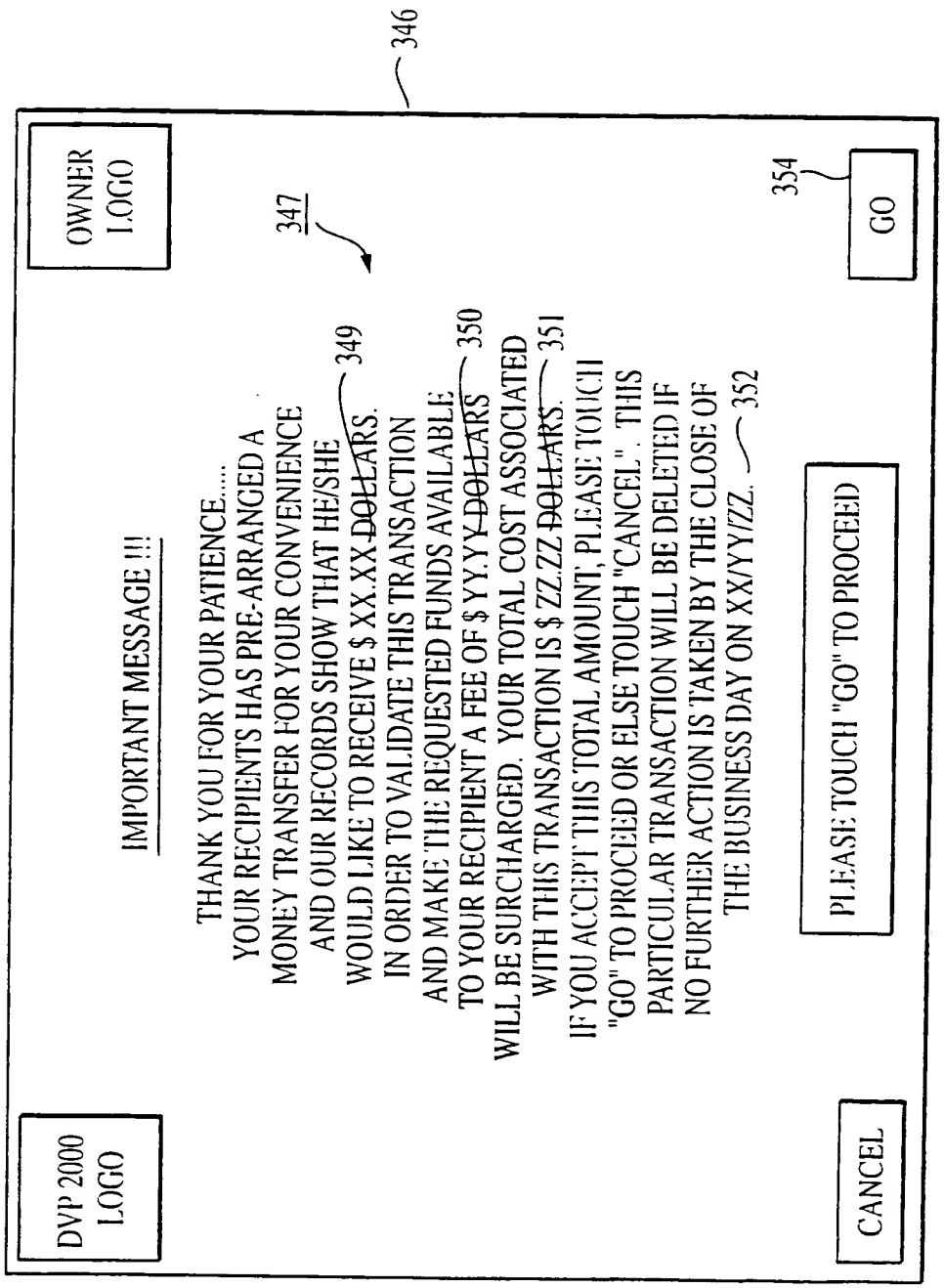
346
OWNER LOGO
347
IMPORTANT MESSAGE !!!
THANK YOU FOR YOUR PATIENCE.....
YOUR RECIPIENTS HAS PRE-ARRANGED A
MONEY TRANSFER FOR YOUR CONVENIENCE
AND OUR RECORDS SHOW THAT HE/SHE
WOULD LIKE TO RECEIVE $ XX.XX DOLLARS. 349
IN ORDER TO VALIDATE THIS TRANSACTION
AND MAKE THE REQUESTED FUNDS AVAILABLE
TO YOUR RECIPIENT A FEE OF $ YY.YY DOLLARS 350
WILL BE SURCHARGED. YOUR TOTAL COST ASSOCIATED
WITH THIS TRANSACTION IS $ ZZ.ZZ DOLLARS. 351
IF YOU ACCEPT THIS TOTAL AMOUNT, PLEASE TOUCH
"GO" TO PROCEED OR ELSE TOUCH "CANCEL". THIS
PARTICULAR TRANSACTION WILL BE DELETED IF
NO FURTHER ACTION IS TAKEN BY THE CLOSE OF
THE BUSINESS DAY ON XX/YY/ZZ. 352
354
GO
PLEASE TOUCH "GO" TO PROCEED
DVP 2000 LOGO
CANCEL

FIG. 46

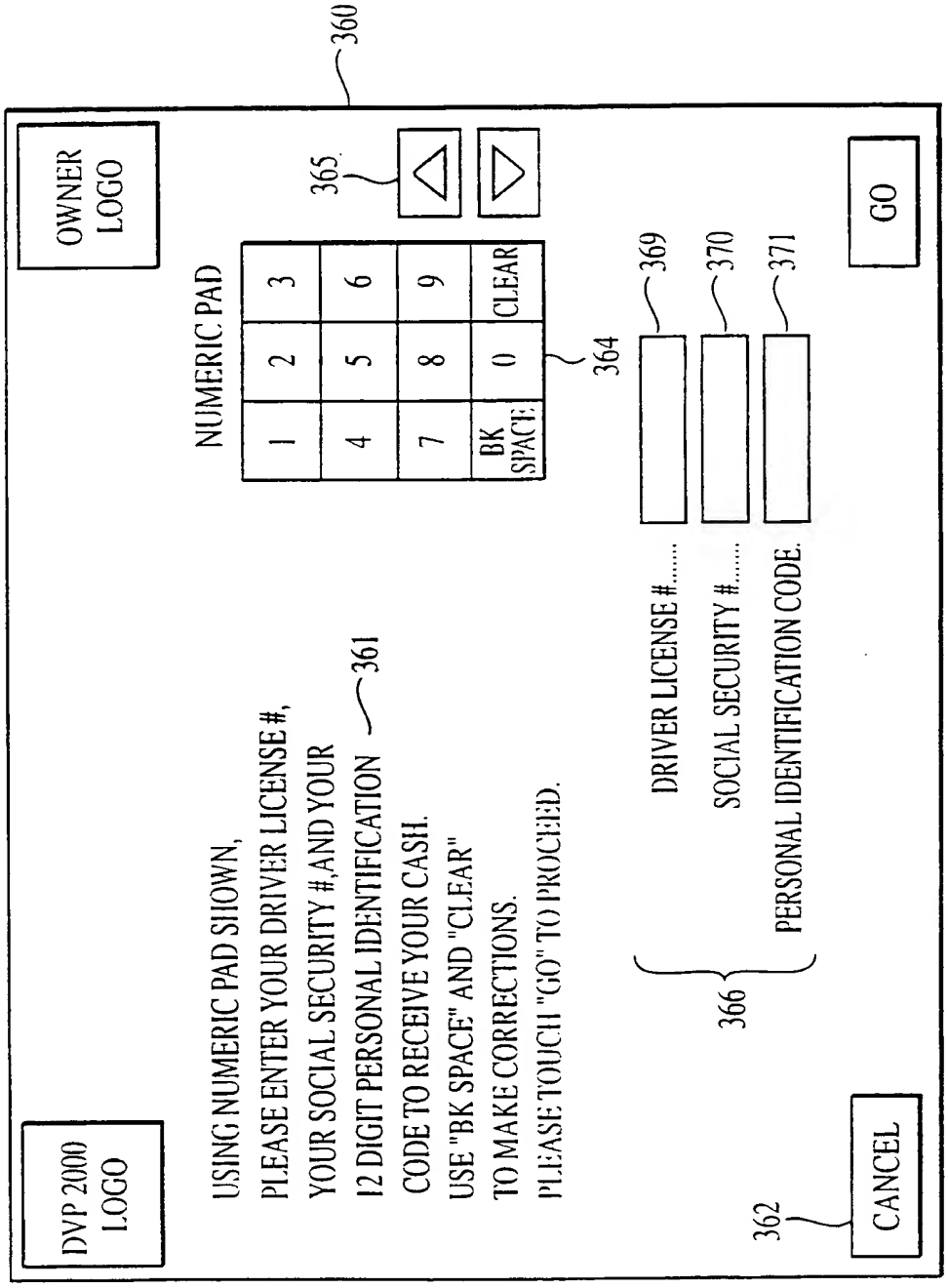
360
OWNER LOGO
NUMERIC PAD
1 2 3
4 5 6
7 8 9
BK SPACE 0 CLEAR
364
365
369
370
371
GO
USING NUMERIC PAD SHOWN,
PLEASE ENTER YOUR DRIVER LICENSE #,
YOUR SOCIAL SECURITY #,AND YOUR
12 DIGIT PERSONAL IDENTIFICATION
CODE TO RECEIVE YOUR CASH.
USE "BK SPACE" AND "CLEAR"
TO MAKE CORRECTIONS.
PLEASE TOUCH "GO" TO PROCEED.
361
DRIVER LICENSE #.....
SOCIAL SECURITY #.....
PERSONAL IDENTIFICATION CODE.
366
DVP 2000 LOGO
CANCEL
362

FIG. 47

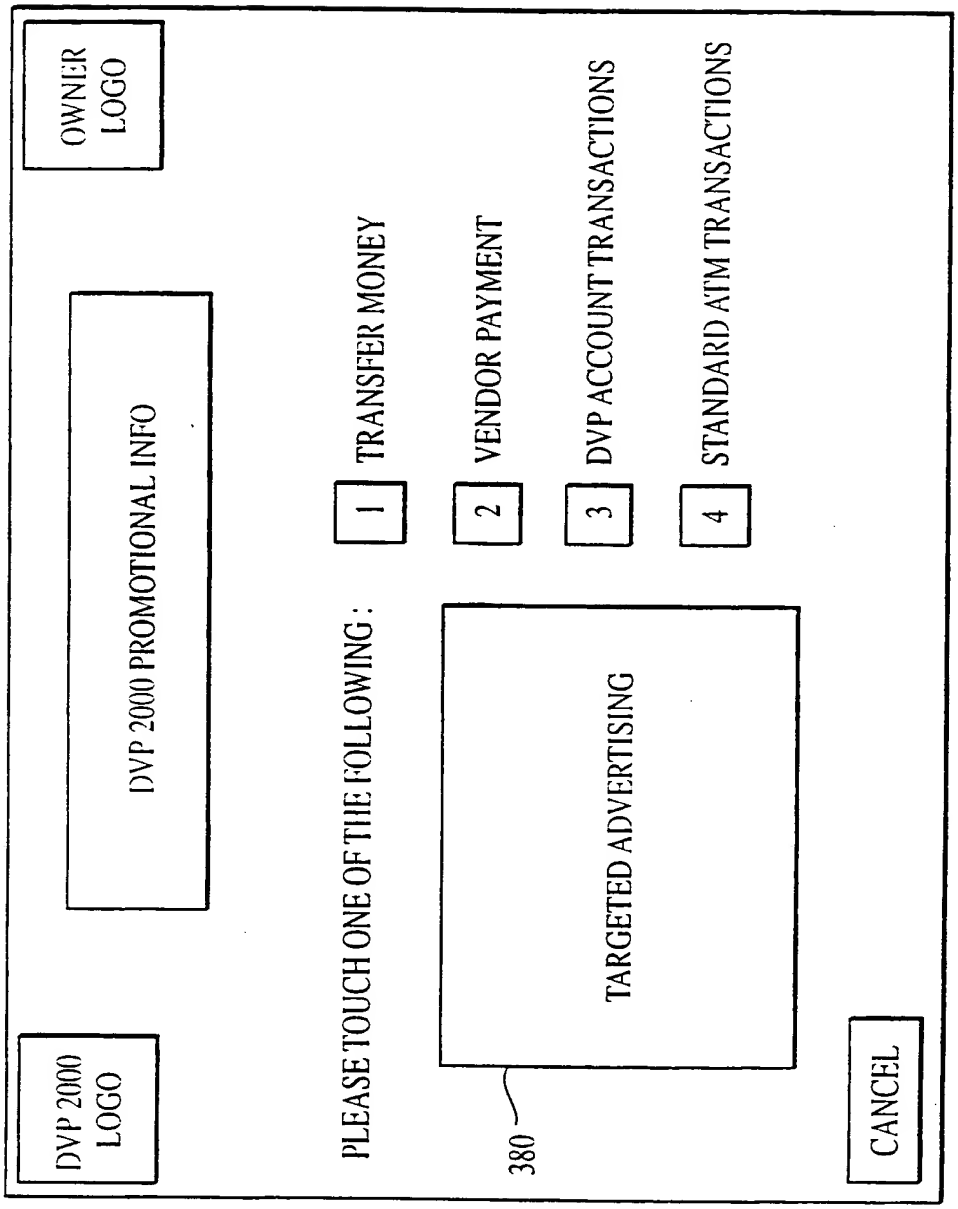
OWNER LOGO
DVP 2000 PROMOTIONAL INFO
1 TRANSFER MONEY
2 VENDOR PAYMENT
3 DVP ACCOUNT TRANSACTIONS
4 STANDARD ATM TRANSACTIONS
PLEASE TOUCH ONE OF THE FOLLOWING :
TARGETED ADVERTISING
380
DVP 2000 LOGO
CANCEL

FIG. 48

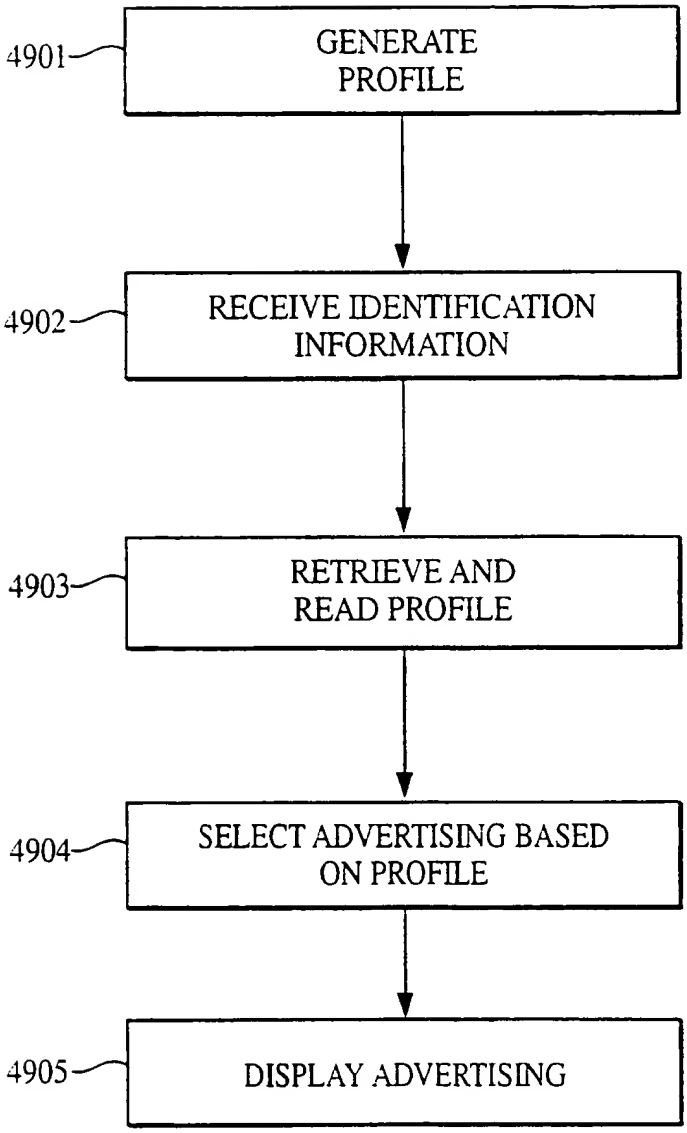
4901
GENERATE PROFILE
4902
RECEIVE IDENTIFICATION INFORMATION
4903
RETRIEVE AND READ PROFILE
4904
SELECT ADVERTISING BASED ON PROFILE
4905
DISPLAY ADVERTISING

FIG. 49

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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Not furnished	6 June 2000 (06.06.2000)	US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:

US	60/138,48 (CON)
Filed on	8 June 1999 (08.06.1999)
US	Not furnished (CON)
Filed on	8 June 2000 (08.06.2000)

(71) Applicant and
(72) Inventor: **PEREZ, Eduardo, J.** [US/US]; Six Meadowlake Circle North, Lake Placid, FL 33852 (US).

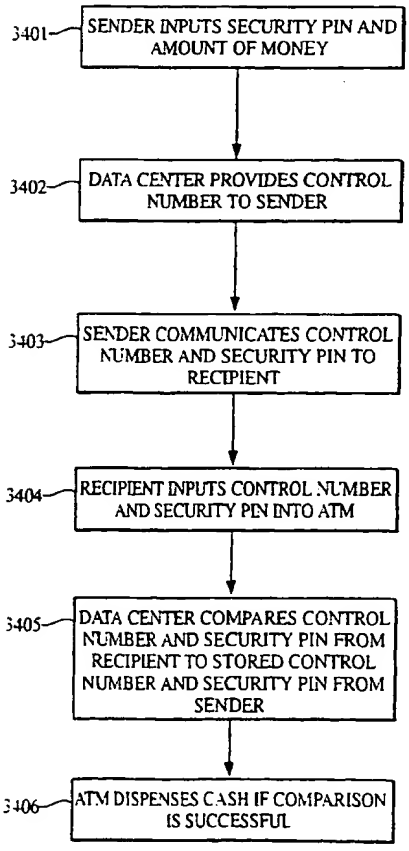
(74) Agent: **PRAHL, Eric, L.**; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian

[Continued on next page]

(54) Title: AUTOMATIC TELLER MACHINE



(57) **Abstract:** A system for transferring money includes a processing center and first, second, and third devices, such as automatic teller machines. The first device is used to pre-arrange a money transfer with the processing center. The second device is used to provide funds for the money transfer to the processing center. The third device is used to dispense money corresponding to the money transfer based on the funds at the processing center.

WO 00/75889 A3

patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— *With international search report.*

(88) Date of publication of the international search report:
12 July 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Inte ional Application No
PCT/US 00/15625

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G07F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 36521 A (CITICORP DEV CENTER INC) 20 August 1998 (1998-08-20) page 10, line 18 -page 13, line 11; figure 3 ---	1-30, 43-80, 93-126, 139-142
X	US 5 650 604 A (MARCOUS NEIL P ET AL) 22 July 1997 (1997-07-22) column 3, line 40 -column 4, line 30; claims 1,17,27,39,55,57 --- -/--	1-30, 43-80, 93-126, 139-142

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 October 2000	02.02.01

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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
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Closa, D

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INTERNATIONAL SEARCH REPORT

Inter ional Application No
PCT/US 00/15625

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 663 546 A (MASKATIYA KARIM ET AL) 2 September 1997 (1997-09-02) column 4, line 31 -column 6, line 46; figures 1-3	1-9, 13-22, 47-50, 93-105, 139-142
X	US 5 350 906 A (BRODY BILL E ET AL) 27 September 1994 (1994-09-27) column 2, line 30 -column 4, line 8	1-9, 13-22, 47-50, 93-105, 139-142

4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/15625

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-30,43-80,93-126,139-142

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

International application No.
PCT/US 00/15625

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-30, 43-80, 93-126, 139-142

   use of an ATM for carrying a paiement

2. Claims: 31-34, 81-84, 127-130

   use of an ATM for opening an account

3. Claims: 35-42, 85-92, 131-138

   use of an ATM for advertising

The three groups of claims have in common only the use of an ATM.

The subject-matter of the first group of claims is well known in the art, see WO-A-9836521 or US-A-5650604.

Moreover the problems to be solved are also different:

first group of claims : allowing fund transfer from a sender to a recipient,
second group of claims: opening an account directly from an ATM,
third group of claims: displaying advertising to the user of an ATM.

It is therefore not possible to define a common group of special technical features between at leadt two of the three subject-matters claimed. The requirements of rule 13 PCT are not fulfilled.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Interr nal Application No
PCT/US 00/15625

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9836521 A	20-08-1998	US 5963647 A	05-10-1999
		AU 6263698 A	08-09-1998
		BR 9807389 A	14-03-2000
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		CZ 9702561 A	12-11-1997
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		KR 223662 B	15-10-1999
		NO 973856 A	21-08-1997
		NZ 303483 A	27-04-1998
		PL 321936 A	05-01-1998
		SK 111297 A	14-01-1998
		WO 9626508 A	29-08-1996
US 5663546 A	02-09-1997	NONE	
US 5350906 A	27-09-1994	NONE	

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